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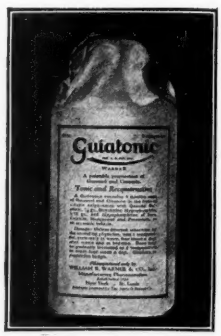

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ILLINOIS MEDICAL JOURNAL

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Editorial

ARE PHYSICIANS PIKERS? CHIROPRACTORS CONTRIBUTED $500 PER CAPITA TO A LEGISLATIVE POOL

Members of the state society who protest against an annual payment of ten dollars dues are referred to the fact that $500 per capita is considered a moderate assessment by chiropractors. If physicians paid even half as much as that to put the merits of scientific medicine before the general public and especially in a legislative lobby, the result to the world at large would be incalculably beneficial.

Reliable information sent to this office asserts that in 1923 a group of thirty-eight chiropractors collected for their legislative pool the sum of $19,000, exclusive of the regular sum for this purpose, secured from several hundred other chiropractors, and of a lesser total.

In the face of this is there lack of justice in the query, "Are Physicians Pikers?"

The statement concerning this $500 per capita chiropractic contribution came into this office from a source no less reliable than one of the chiropractors who had contributed. He was a Palmer graduate. For years he fought the state society. Finally this Palmer graduate went to the National School of Chiropractic in Chicago. There he took an additional six months course, was graduated, examined by the medical board and passed. Solicited this year again for a contribution he refused to give a cent to the chiropractic cause. He is ready now to tell the world that it was all a mistake.

In 1923, a right hand lieutenant of the representative of the Federation of Labor openly lobbied for the chiropractors. No doubt this was due to the fact that one of the key-stoners in the chiropractic movement was once an official in the federation, and was apparently helping the labor representative as much as was possible.

Here is a beautiful illustration of one of many

angles demanding counteraction in dealings with the legislature.

It takes money to lobby even for the right. *No wonder the cults and isms have a legislative* walkover when man after man gives $500 per capita, and the legitimate doctors groan about $10 per head for dues to the State Medical Society.

ANTE-BELLUM PRUSSIANISM IN EXISTENCE AT WASHINGTON

Has the Time Arrived When the Practice of Medicine and Pharmacy Is to be Conducted by the Courts?

A new wrinkle in ways that make knowledge play the handmaid of assumed authority reveals itself through the new despotism to be exercised by the Bureau of Prohibition in the U. S. treasury department.

Here is a new putting on of the screws. If the squeezing of the vise keeps up, before very long there will be such a purely ante-bellum Prussianism in existence at Washington that the Declaration of Independence and the portraits of Washington, Jefferson, Hancock and the rest might just as well be turned towards the wall. The latest scheme of diabolical autocracy is to be found in the new form of application for basic permits in the alcohol industry of the country. The dark gentleman in the high timber in this blank, thrust in the face of the vast alcoholic industry on June 28 and without any previous warning, lies in the demand that all such applicants shall waive constitutional rights for the protection of person and property, if invaded by the government. The resentment to this un-American autocratic demand was well expressed at the conference in the office of the assistant secretary of the treasury, July 14, when many interested organizations were heard in protest. Speaking for the organizations requiring basic permits the following language was used:

We demand to know whether the time has arrived when the Practice of Medicine and Pharmacy is to be conducted under the supervision of the courts. This in view of recent attempts to compel applicant for basic permits to waive constitutional rights to the protection of his person and property if invaded by the government. Nothing quite so high-handed or revolutionary has heretofore been attempted by fanatics in or out of congress.

Representatives of the medical and pharmaceutical professions and of the drug trade and flavoring extract business, and also of the leading bonding companies of the United States, were shocked at the bureau of prohibition of the treasury department in Washington, June 28, when handed a new form of application for basic permits under the provisions of "Title 2 of the National Prohibition act."

This form, if made effective, will be used for the renewal of existing permits, to become effective within two weeks. The applicant for a basic permit or its renewal is compelled, in the new form, to make a contract with the federal government in which he agrees to waive his constitutional rights to the protection of his person and property if invaded by the government in the enforcement of the law. Permits will not be granted or renewed unless he does enter into this contract with the government by using the form of application prescribed. Many things have been attempted in the name of "law and order," the "public welfare," "reform," "public health and safety," etc., since the enactment of the National Prohibition act, in 1920. Nothing quite so arrogantly despotic has been proposed by prohibition fanatics, in or out of congress, or the executive branch of the federal government, as the new form of application for basic permits suddenly flashed upon the representatives of alcohol-using professions and industries.

Not until June 28 did the prohibition bureau give the slightest notice of its intention to change the form of application for basic permits and their annual renewals. A storm of protests immediately came from representatives of all professions and industries represented at the conference. The feeling of indignation was so strong that the session of the conference on the first day adjourned without formal notice of adjournment. The representatives simply walked out.

Representatives of the protesting professions and industries, including the National Association of Retail Druggists, *were informed frankly that if they did not like the new form of application for basic permits they were at liberty to test its legality in the courts.* Counsel for the National Association of Retail Druggists demanded to know whether the time had arrived when the

practice of medicine and pharmacy had to be conducted under the supervision of the courts. He gave frank notice that if this were to be the program it was likely that the National Association of Retail Druggists and other interested associations concerned would petition the next congress to repeal the new law creating a bureau of prohibition in the treasury department, because unnecessary. The chairman of the revision committee replied that any such threat would have no influence whatever.

Harry B. Thompson, general counsel for the proprietary association, asked whether or not it was the purpose of the revision committee to make the prohibition commissioner merely a supervisory officer. The question was ignored. Counsel for the N. A. R. D. informed the revision committee that he would immediately notify the headquarters of the National Association of Retail Druggists in Chicago and suggest that the officers of the forty-six state pharmaceutical associations and all of the city and other local pharmaceutical associations in the country be promptly advised of the situation.

The organizations represented at the conference included American Drug Manufacturers' Association, the American Medical Association, the National Association of Retail Druggists, the Proprietary Association, the American Association of Pharmaceutical Manufacturers and the National Association of Manufacturers of Flavoring Extracts. Wine manufacturers, distillers of distilled spirits and representatives of bonding companies were also represented.

SOME PLAIN TALK AT THE CONFERENCE

Samuel C. Henry, Secretary of the National Association of Retail Druggists and a pharmacist of thirty years' practical experience, who was present at this conference, did not mince words in addressing the administrators, Prohibition Commissioner Doran, and the assistant secretary of the treasury, Seymour Lowman.

He told them frankly that if he were conducting a retail drug store today and a prohibition officer undertook to tell him how much alcohol he needed for the conduct of his business, he would soon let him know that he would not permit it and if he did not obtain all he needed he would get it if he had to go to court. Of course, Mr. Henry added, retail druggists do not want to be compelled to go to court every time they require alcohol for medicinal purposes.

Mr. Henry regretted the fact that the average prohibition administrator could not picture a retail druggist as he actually is in rendering pharmaceutical service to the public. He reminded the administrators that they have an eye single to one thing, the enforcement of the National Prohibition act, while the average retail druggist deals with more than five thousand different items in addition to alcohol.

The druggist is serving the public in innumerable ways, including the compounding and dispensing of life saving medicines, and therefore when he fails to observe some technical requirement in the regulations, the druggist should not be dealt with arbitrarily and inconsiderately as a wilful, or deliberate, offender against the law. Mr. Henry suggested that a retail druggist should be given an opportunity to explain before prohibition administrators cite him for the revocation of his permit upon the discovery of some irregularity. Druggists should not be put to the expense of employing attorneys, appearing for trial, and perhaps suffering an injury to their professional reputation by being placed on trial, when a preliminary hearing before the administrator might clear up everything.

Mr. E. C. Brokmeyer, general attorney for the N. A. R. D., next addressed the conference. He gave the conference the difference in viewpoint of Englishmen and Americans respecting law enforcement. He said that Sir William Glyn-Jones had expressed surprise during the American Bar convention in London three years ago because the government at Washington had advertised the large number of arrests for violation of the National Prohibition act as evidence of law enforcement. Englishmen regard the effect of laws rather than a showing of law enforcement as the more important consideration. Mr. Brokmeyer insisted that it would be as unfair to regard present prohibition officers as potential outlaws because General Lincoln C. Andrews had dismissed more than eight hundred of them within the past two years as it would be to regard retail druggists as potential "bootleggers," because some had violated the law. The speaker impressed upon the administrators that they should disabuse their minds of the idea, if they had it, that the retail druggists of the United States were seeking the privilege of dispensing

spirits for medicinal purposes. This was not the fact. The majority of the druggists were opposed to handling liquor. The duty of dispensing it was imposed upon retail druggists exclusively by congress over the protest of the N. A. R. D. Mr. Brokmeyer pointed out the danger *of more and more oppressing the licensed traffic in liquor and narcotics while the unlicensed is permitted to run wild.* Mr. Brokmeyer frankly told the conference that if permittees found by experience that they were being discriminated against by the government in favor of unlicensed operators, the logical and inevitable result would be the giving up of permits and operation without government license, inspection or supervision. He also protested against the revised regulations holding the proprietor of a drug store responsible for the acts of his employees unless within the scope of their employment, insisting that the courts have held that the principal is not responsible for the act of his agent unless within the scope of his employment and that a master is not responsible for the act of his servant unless within the scope of his employment.

AN ELEGANT TRIBUTE TO DR. WILLIAM H. WELCH, THE CHAIR OF MEDICAL HISTORY AT JOHNS HOPKINS

The *Cincinnati Journal of Medicine* is responsible for the following editorial from the *New York Times*:

"Johns Hopkins University in establishing a chair for the history of medicine, believed to be the first of such scope in America, is emphasizing the importance of the physician's background. In no other profession, unless it be the ministry, is a background more important than in that which has to do with progress in knowledge and treatment of bodies in which there is something as Dr. Thomas Browne said, 'that can be without us and will be after us, though it is strange that it hath no history what it was before us nor cannot tell how it entered in us.' But history in the hands of physicians and surgeons and research students has been written during the three centuries since that physician who desired to be remembered only in the 'universal register of God,' wrote his 'Religio Medici.' No one in America knows that history better than Dr. William H. Welch, who is to be the first occupant of the first American chair in this subject.

"Dr. Welch has already two major achievements to his credit. In 1884 he organized the faculty of the Johns Hopkins Medical School, and in 1916 he organized the Johns Hopkins School of Hygiene and Public Health. In the first he led 'a new departure in medical education,' and incidentally trained a number of the foremost pathologists of America, besides doing important research work himself. In the second, he organized and directed the work of the first medical institution in the world designed primarily to promote research and teaching in the field of preventive medicine and public health.

"Now he enters upon a third undertaking in which the cure and prevention of disease are linked into a unity. With his unusual experience and learning, unsurpassed since Dr. Osler's death, and with a personality drawing all men to him, he comes in the autumn of his life to give of his own culture to the enrichment of those who are to carry on in his profession. Some may look upon such study as a mere ornament in medical practice; but his answer is that it is 'an asset to successful practice and to the pursuit of medical science.' It is essential to a further development of what we now have to show how we came into possession of it. He cites Dr. William Osler, his former associate, 'one of the outstanding physicians of all time,' as a man whose knowledge was 'very largely based on the history of medicine.' He might have cited also Sir Thomas Browne:

" 'I could never content my contemplation with those general pieces of wonder—the flux and reflux of the sea, the increase of the Nile, the conversion of the needle to the North; and have studied to match and parallel those in the more obvious and neglected pieces of nature which without further travel I can do in the cosmography of myself. We carry with us the wonders we seek without us; there is all Africa and her prodigies in us. We are the bold and adventurous piece of nature which he that studies wisely learns in a compendium what others labor at in a divided piece and endless volume.'

"It is the history of man's exploration and discovery in the cosmography of his own self that Dr. Welch will now teach; and his own achievement is the best testimony to the value of his subject. His entrance upon this work is itself another milestone in the history of medicine in America."

DR. PATRICK MANSON THE FATHER OF TROPICAL MEDICINE. BRITISH MINISTER OF HEALTH UNVEILS A TABLET TO HIS MEMORY

A few months ago the British Minister of Health, Mr. Neville Chamberlain, unveiled a tablet in memory of Patrick Manson, "father of tropical medicine" at the Albert Dock Hospital, London, where so much of Manson's work was done. Mr. Chamberlain, in unveiling the tablet told how the discovery that malaria was conveyed by the mosquito stimulated the imagination of investigators and led to the acquisition of other knowledge. Mr. Chamberlain said that he did not think it was too much to say that the health and wealth of the whole world had been advanced and multiplied by the patient, unobtrusive labors of Manson and a few devoted and skilful workers. He doubted whether the cutting of the Panama Canal would ever have been carried through had it not been for these discoveries. As indicating the character of Manson, Mr. Chamberlain mentioned that on returning from China after many years' work there, he offered all his knowledge to Ronald Ross, who was engaged in similar investigations, and there ensued a correspondence extending over four years, that was a monument to their complete devotion to public service, and showed an entire absence of jealousy.

FIGURES PROVE THAT FACTS DO NOT BEAR OUT CHICAGO'S REPUTATION FOR MURDER

Almost two dozen cities—twenty-one to be exact—have a far higher pro rata murder rate than Chicago. In the face of the fact that Chicago is an international byword for the impunity with which murder is committed, investigation reveals that out of a group of cities examined the murder rate per each 100,000 of population ranks in one instance as high as fifteen times what that rate is in Chicago.

Jacksonville, Fla., heads the list. There the death rate from murder is 75.9 per cent per each 100,000 of population, or fifteen times what that of Chicago is. Tampa, Fla., has a rate of 67.6 and there are other surprising statistics from all over the country. "Give a dog a bad name and hang him." Chicago's crime situation is not to be condoned but the state of Illinois really should not sit silent under such a shameful accusation as that made against Chicago when it is untrue.

Bearing out this contention glance at a few figures. Dr. Frederick L. Hoffman, Statistician for the Prudential Life Insurance Company, in the *Spectator and Insurance Journal,* speaking of the twelve thousand killings in America in 1926, comments as follows: "One person in every ten thousand met a violent death in the hundred and eighteen leading cities in the United States last year. Chicago had the doubtful distinction of having the most homicides, 510; New York, a city of approximately twice the population of Chicago, had 340. In twenty-eight of the leading cities the rate was 9.9 per 100,000 population, as against 11.0 in 1925." Dr. Hoffman comments on this statement as follows: "Slight as it is, the reduction is encouraging." He comments further, "Our murder record of approximately 12,000 persons each year is a most serious indictment of American civilization, an evidence of lawlessness which has no counterpart in any other country in the world." In contrast to the wholesale killings in America we are reminded that there were only 17 murders in London in 1926, and that there were arrests in 16 of the 17 cases. An astonishing fact is that in the matter of homicides, Jacksonville, Florida, heads the list of American cities having a rate of 75.9 per 100,000 population. Tampa, Birmingham and Memphis come next on Dr. Hoffman's list.

A question worthy of a good deal of thought and study is, Why should there be 104 homicides in Jacksonville, Florida, a city of 130,000, and but two in Grand Rapids, Michigan, a much larger city. There were 75 homicides in Memphis, a city of 170,000, but only 3 in Worcester, Massachusetts, a city of approximately the same size, according to Dr. Hoffman.

Dr. Hoffman's tabulation in detail for 1926 concerns 118 American cities. The combined homicide death rate for these cities for the year 1926 was 10.1 per 100,000 population as compared with 10.5 for the year 1925. The homicide death rate increased in 37 cities and either remained stationary or declined in 81 cities. The doctor considers this an evidence of progress. No homicides were reported in 18 of the 118 cities.

"It is gratifying to note a slight decline in

the murder rate of Chicago, which in 1925 had a rate of 18.8 against 16.7 for 1926. There was also a decline in the murder rate in New York City from 6.4 to 5.7 per 100,000 population, while for the city of Philadelphia the rate declined from 9.7 to 8.6."

The cities in which the rate for 100,000 population was 18.0 or more are these:

	1926
Jacksonville, Fla.	75.9
Tampa, Fla.	67.6
Birmingham, Ala.	58.8
Memphis, Tenn.	42.4
New Orleans, La.	33.7
Kansas City, Mo.	32.3
Dallas, Tex.	32.0
Charleston, S. C.	29.7
Nashville, Tenn.	29.2
Mobile, Ala.	28.4
Louisville, Ky.	26.7
Houston, Tex.	25.8
Detroit, Mich.	25.3
Sacramento, Calif.	21.8
Pueblo, Colo.	20.5
Kansas City, Kans.	18.8
St. Louis, Mo.	18.6
Cincinnati, O.	18.2
Winston-Salem, N. C.	18.1

Why should Jacksonville have five times the number of human killings to Chicago, on a per capita basis?

Of the large cities Boston has the lowest homicide rate. An item worthy of more than passing comment is the fact that the larger cities have not proportionately the most murders.

Dr. Hoffman gives the underlying cause of the murder tendency as the enormous increase in wealth. We quote his comment on this phase as follows: "Our enormous increase in wealth is in itself one of the underlying causes of the murder tendency. Temptation to murder as well as to less violent crimes increases on every hand. Methods of murder are becoming more refined, more subtle and more difficult of detection. It is unquestionably true that murder in this country has become an established trade on the part of many. Police protection should not be in proportion to population, but in proportion to wealth and the accumulation of property. The best hope for the future lies in better law enforcement, in speedier trials, and in sentences more appropriate to the nature of the crime committed."

THE SCIENTIFIC SERVICE COMMITTEE REPORTS PROGRESS

A meeting of physicians representing the various Councilor Districts was called on July 21.

Those present were Doctors E. E. Perisho of Streator, H. C. Blankmeyer of Springfield, I. H. Neece of Decatur, C. E. Williams of Rock Island, T. E. Kinley of Rockford, Harold M. Camp of Monmouth, Charles J. Whalen, William C. Danforth and James H. Hutton of Chicago.

It was the opinion of those present that more programs on obstetrics should be presented before county and branch medical meetings and at the State meetings.

Dr. Perisho and Dr. Neece stated that there was no subject of more interest than that of obstetrics and that programs covering this subject were more popular than any others. The chief difficulty in putting on such programs seemed to be the fact that many secretaries and program chairmen of county societies do not know where to obtain speakers on obstetrics.

After discussing just how the subject was to be brought before medical societies in a satisfactory way, Dr. Danforth said that he would be willing to work with Doctors David S. Hillis and N. Sproat Heaney on some outlines presenting the latest scientific methods which would be furnished physicians asked to speak on obstetrics. With such an outline the physician could prepare his talk and thus bring to medical societies the latest scientific information plus the knowledge gained from experience.

It was agreed that such programs had better be presented by men from outside the county because most men are rather timid about presenting papers before their own societies.

Dr. Hutton reported that a start had already been made in preparing a list of speakers on whom the various societies might call for such programs. It seemed that counting in the fifteen or more physicians in Chicago who were already prepared, that a very satisfactory list could be compiled of physicians throughout the state and from cities in Missouri and Iowa which are close to the border line. Dr. Perisho suggested that such a list be sent to the county secretaries.

A CORRECTION
THE EDUCATIONAL COMMITTEE SERVED SEVENTY NOT SEVEN COUNTIES

On page 4 of the July issue of the JOURNAL there appeared an article "Work of the Educational Committee from January 1 to May 12." In the first paragraph a typographical error was made as follows: "Seven Counties Have Been Served, etc." This should read Seventy Coun-

ties in the State Have Made Definite Use of the Services Offered by the Educational Committee during these four and one-half months."

THE CLINIC SITUATION FROM THE STANDPOINT OF THE ILLINOIS STATE MEDICAL SOCIETY

A Statement of Position Relative to Free Clinics and Pre-School Child Examination

In December, 1924, the council of the Illinois State Medical Society made a declaration of principles relative to conducting clinics in Illinois.

Preamble: Definition of clinic.

For the purpose for which this declaration is made, the word "clinic" shall be defined and classified as follows:

1. A free clinic for the benefit of the indigent poor. These clinics shall be under direction of, or by consent of the local county medical society. Physicians shall give their services gratis and to this service only the indigent poor shall be entitled.

2. Clinics for the benefit of the profession. These clinics shall be either under the direction of, or by the consent of the local medical society. The prime object of these clinics shall be for the instruction and guidance of the physician and to which he may bring his private patients.

(Physicians conducting clinics of any nature must conform to the same ethical rules as physicians in private practice and will be held accountable for their conduct by their local county society—see Section 4 and 8, Principles of Medical Ethics of the A. M. A.)

Each local Society must decided as to the policy of its clinics, make its own rules and see that said rules are enforced.

Suggestions: 1. The Illinois State Medical Society discourages, and the local county medical societies should discourage the use of the word "clinic" for any other purpose than those mentioned in the declaration of principles, referring principally to the use of the word "clinic" by any single physician, or group of physicians in private practice.

2. The Illinois State Medical Society should have supervision over all so-called "Baby shows" or "Baby Conferences," held in the State of Illinois. These shows or conferences should be under the direct supervision of the local county medical society, in the county where these conferences are held.

3. While it is not deemed necessary to have the teaching clinics of medical schools under the direction of the local county medical society, we do believe that all medical schools should use the utmost discretion in the selection of their cases, thereby eliminating all these cases, except those of the indigent poor.

4. As it must be decided who are the "indigent poor," we believe that a basis of discrimination can be set up on two points:

1. Income.
2. Dependents.

This was presented before the House of Delegates at the Annual Meeting in Quincy in May, 1924, and unanimously approved.

At the 1927 Annual Meeting of the Society in Moline this same matter was discussed under resolution number 3, headed "Parent-Teacher Associations." (See minutes of House of Delegates, July, 1927, Illinois Medical Journal, beginning on page 23).

Under this discussion, it was unanimously shown that the Illinois State Medical Society believes that in the Pre-school child examination, the children should be examined by the family physician, in the office and not in groups, in the form of a "clinic." The physician is entitled to a fee for this service in all cases where parents are able to pay. The "indigents" are considered to be those who receive "charity" from some other charitable organization. After much discussion, it was voted to refer the question to the council and to the Educational committee for further consideration. A motion was passed as follows: "That the House of Delegates frown upon the practice of free clinic examinations of pre-school children and advises the county medical societies through the secretary, of this action."

INDUSTRIAL EYE INJURY PLAYS MINOR ROLE IN BLINDING CONDITIONS

Glasgow, Scotland, Furnishes First Comprehensive Survey of Industrial City and Reveals Interesting New Facts

According to Susa P. Moore of Chicago a study of blinding conditions of the eye recently

made in Glasgow, Scotland, by Dr. Freeland Fergus has more than fulfilled its original purpose of furnishing Dr. A. K. Chalmers with essential data for intelligent administration of the Blind Persons Act in the South-West of Scotland. It has resulted in a report that is a compelling brief for the place of the ophthalmologist in industrial medicine. It has shown that the best program for the prevention of blindness is a public health program that effectively combats the more common infectious diseases, particularly syphilis and measles, and it has shown that injuries to the eye rank fourth in importance as a cause of blindness, with neglected puncture wounds and induced sympathetic opthalmia as the greatest single cause of disaster among the injury cases.

The study of blindness in Glasgow represents an admirable organization of facts and uses a survey technic that is worthy of wide use in industry. The report covers 1,206 adult blind persons who constitute the city group of a known 1,655 blind persons registered throughout the district. These persons were studied separately because it was desired to distinguish between causes of blindness operative in urban and rural communities and because Glasgow is so distinctly an industrial community it was thought that the facts brought out would have a particular bearing upon industrial hygiene. On the basis of the report the Joint Committee for the South-West of Scotland reported very fully on the various trades and occupations in relation to injury to the Home Office and the Mines Department, in whose hands the measures required for the prevention of industrial accidents very largely rests. Six great groups of causes were examined: (1) Inherited and congenital conditions; (2) infections; (3) injuries; (4) errors of refraction; (5) various; and (6) cause unknown, or not definitely ascertainable. In 32.83 per cent of cases the cause was unknown; 23.04 per cent were due to infectious disease (17.49 per cent to venereal diseases, and the surprisingly high percentage of 2.90 to measles); 18.25 per cent were due to injury; 4.48 per cent to various causes; and 3.57 per cent to errors of refraction.

The inquiry revealed the unexpected result that the accidents of civil life, to which children are especially liable, caused twice as many cases of blindness as did occupational injuries. The figures for blindness resulting from occupational injuries were such as to reflect great credit on employer arrangement for the prompt treatment of injuries to the eye. It is a particularly interesting feature of the report that 65.4 per cent of blinding accidents occurred in civilian life, and only 34.6 per cent in the course of occupation. The civilian accidents occurred chiefly among children. More than half of these conditions arose before the age of fifteen. The nature of civilian accidents was greatly varied, due chiefly to "snowballs, cricket balls, stones, glass, blows with a fist, falls, etc." The structural alterations associated with civilian and industrial accidents were as follows:

	Civilian	Industrial
Corneal Opacities	6	10
Iritis	8	4
Sympathetic Ophthalmia	71	22
Dislocation of Lens	4	2
Cataract	3	3
Separation of Retina	8	..
Optic Nerve Atrophy	23	5
Both Eyes Enucleated	2	2
Tuberculosis of the Bulb	9	12
Total	134	60

The report declares that high frequency of sympathetic ophthalmia among civilian groups may be attributed to the characteristic delay in seeking medical treatment in the case of children. The chance of a child developing blindness following an injury is at least twice that of an adult. It is much greater than that of an adult injured in the course of occupation.

Interesting confirmation of this is found in an earlier statistical review of patients seen in the Ophthalmic Institute of Glasgow. Of these 70.7 per cent were occupational in origin, and 29.3 per cent non-occupational. These figures, it will be noted, are roughly reciprocal of those previously quoted in regard to blindness, namely 65.4 per cent in civilian life, and 34.6 of occupational origin. No children under 15 years of age receive occupational injury, which makes still more impressive this confirmation of the preventive value of prompt treatment. Penetrating wounds in particular, however slight, require competent supervision. One-third of cases of industrial injury and more than one-half of civilian injuries suffered this complication.

The report is less comprehensive with regard to errors in refraction, but it is pointed out that 38 cases of blindness were due to extreme shortsightedness, and 5 to extreme long sight. Shortsightedness in particular may be of a pernicious

type, associated with serious disease inside the eye.

Two other recent British studies elaborate more fully upon the use of glasses to prevent undue eye strain in industry. N. Bishop Harman, ophthalmological surgeon to the West London Hospital, has tabulated several thousand cases serially in order to discover the most common eye conditions to consider in an eye hygiene program. He declares that senial cataract and lens and fundus changes induced by certain trades point to the possibility of prevention of excessive change by the correction of high errors in refraction. Tired eyes, sore eyes, and then permanently defective eyes are in direct sequence, he states. Men with high errors of refraction or of muscle balance should be diverted from close work, he says. There is a wide difference between sedentary and manual workers. The outstanding common occurrence among manual workers is sudden damage to the eye. He emphasizes the necessity of suitable goggles in dangerous trades and is particularly insistent in declaring the dangers of dirt. Any foreign body may be septic. Its removal should be followed by irrigation. Older workers, who may have a chronic slow, inflammation, require particular care.

The British Medical Research Council has studied one occupation, that of linking in machine made hosiery, with a view of reducing accommodative work of the eye by the use of glasses. At least 80 per cent of the work of linkers requires the worker to be from five to eight inches from his work in order to see. All errors in refraction were corrected in the group of linkers studied, and they were given from 0.75 to 1.75 diopters in addition to produce the sharpest possible vision at the point desired and so reduce the long periods of accommodation required in this process. In every case the subject was able to increase his rate of work and his fatigue was reduced. In fitting these glasses, no effort was made to focus the eyes more sharply, but the report suggests that a prism might be of further use.

The importance of the British Medical Research Council formulations regarding the physiology of vision is appreciated when it is considered that more than six hundred separate studies made during recent years are thereby correlated. The rules of eye hygiene growing out of this study will be evolved with the usual British thoroughness. Such rules, it is conceived, could immediately become effective among insured workers at least. This would affect 113,000 workers in the state of Illinois alone. Meanwhile, pending such universal application of ophthalmology in the interest of workers compensation awards in Illinois during 1925 were made to 2,309 injuries to a single eye aggregating $587,623; and to 67 injuries to both eyes, amount $33,041. In the last group the average disability period was 22 days and the average cost per case $493. Payments for permanent total loss of a single eye accounted for another $11,049, and the loss of both eyes for $4,369.

EYE AND EAR PHYSICIANS OF ILLINOIS WERE SUPERMEN OF IRON HEARTS AND WILLING HANDS

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The Bureau County Medical Association has recently presented to the Matson Public Library a copy of "The History of Medical Practice in Illinois," volume one. The second volume will also be given as soon as it is off the press. Volume one gives the history preceding the year 1850. The history is published by the Illinois State Medical Society in commemoration of its diamond jubilee. Several pages are given to an interesting account of the pioneer doctors in Bureau County. There are interesting side lights on life in these early days in the Middle West. Many illustrations add to the attractiveness of the book.

Note: The History should be in every public and private library as well as in every doctor's office. This History will help materially in reestablishing the doctor to the status he formerly occupied in the estimation of the public.

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Horwitz, S., M. D., Central Nat'l Bank Bldg., Peoria.
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Peoria City Medical Society, 532 Jefferson Ave., Peoria.
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(See also advertising page 37)

CLINICAL CONGRESS OF PHYSICAL THERAPY AND SIXTH ANNUAL MEETING AMERICAN COLLEGE OF PHYSICAL THERAPY

The American College of Physical Therapy announces that plans have been completed for its 1927 Clinical Congress of Physical Therapy and 6th Annual Meeting, to be held at the Hotel Sherman, Chicago, October 31 to November 5.

The program is extraordinary in character. The first three days are to be devoted to a school of instruction. For this purpose the country's most prominent clinicians and teachers have been selected and intensive fundamental and clinical training will be given. There will be one day of sectional meetings, the following distinct sections being represented: 1. Medicine, Diagnosis, Pediatrics and Endocrinology; 2. Surgery, Gynecology, Urology, Orthopedics; 3. Eye, Ear, Nose, Throat, Oral Surgery.

The fifth day of the Congress will be devoted to a Joint Session. Numerous special addresses by some of the foremost leaders in medicine will be offered. These will be of general interest to all whether in one specialty or another. The closing day will be given over to hospital and dispensary clinics.

Inasmuch as physical therapy has made such rapid strides in the past few years, a gathering such as this is of vital interest to every practitioner and specialist. The program in itself is attractive but additional features in scientific and commercial exhibits, demonstration clinics, small group conferences, etc., will help to make this congress an unusual event.

Physicians in good standing in their county societies are eligible to attend as are also technicians and doctor's assistants properly vouched for.

Those contemplating attendance are urged to enroll by mail as early as possible. The fee for the instruction classes is $10.00 payable by all whether fellows of the college or not. Non-fellows of the college must pay in addition a registration fee to the assembly $5.00. Send for program and information to Chairman, Convention Committee—

American College of Physical Therapy,
Suite 820, 30 N. Michigan Ave.,
Chicago.

A MIND CURE REQUIRES NO FAITH

Henry James compared mind and faith cures, and concluded that a mind cure requires no faith, while a faith cure requires no mind.

Christian Science, that is far from Christian as defined by theologians, continues to delude individuals. Its so-called "healers" or "practitioners" by their methods that are far apart from science and the scientific are causative factors in hastening death or condemning to permanent disability and suffering those whom they are able to induce to employ them. As the people become educated in health laws of right living, the factors that actually cause disease and how disease may be prevented, this "Christian Science" imposition will cease to exist as one of our great American fallacies. If these "healers" would but ascertain the common laws of physiology and physiologic function, possibly some of them might desist. What interesting factors would be revealed could they but be psychoanalyzed.—*J. Mich. M. S.*

SPECIALISM DATES TO 500 BEFORE CHRIST

MEDICAL SPECIALISM IN THE DAYS OF HERODOTUS
(484-425 B. C.)

According to Wells,[1] Herodotus was born in 484 B. C., and thus belongs in the fullest sense to the "great" period of Greek history. He was among the first writers of critical and intelligent history, and is sometimes referred to as the Father of History.

Obviously, the condition of human beliefs and opinions fall within the field of history as indicating contemporary thought, and it is therefore interesting to direct attention to a recent edition of Herodotus[2] in which he comments on medical specialism during his period, as follows:

The practice of medicine is so divided among them, that each physician is a healer of one disease and no more. All the country is full of physicians, some of

1. Outline of History, H. G. Wells, 1921.
2. Herodotus, with English translation by A. D. Godley, London, William Herinemann.—*A. M. A. Federations Bulletin.*

ine eye, some of the teeth, some of what pertains to the belly, and some of the hidden diseases.

The first report of the Commission on Medical Education contains an analysis of specialization in medical practice in the United States in 1925, showing that there are 15,417 physicians limiting their practice to a specialty in this country. If this is taken as an indication of medical progress, we have not advanced a great deal since the days of the ancient Greeks.

THE GENERAL PRACTITIONER IS, AND MUST REMAIN, THE BACKBONE OF THE MEDICAL PROFESSION

The General Practitioner's place in the great army of physicians, waging warfare against disease, has been aptly likened to that of the infantryman in the military establishment. He is, in fact, the doughboy of the profession, and on his efficiency and well-being, depends the morale of that profession. He must therefore realize the responsibilities which rest upon him. He must use the five senses in his posession and such special instruments as he can command, he must reason logically to a conclusion and apply appropriate remedies. To do this is as truly scientific in method as the work of the laboratory research man.—*George C. Davis, Lycoming Co. (Pa.) Bull.*

UNITED STATES HOMICIDE DEATH RATE TWELVE TIMES THAT OF ENGLAND AND FIVE AND A HALF TIMES THAT OF CANADA

New England Has Fewest Homicides in Industrial Population

The Statistical Bulletin of the Metropolitan Life Insurance Company reports that the *homicide* death rate of the United States per thousand of population is nearly twelve times that of England and about five and one-half times that of Canada. Although this includes our colored population, among whom the rate is much higher than for the white population, even if restricted to white persons the homicide rate of the United States would still be almost seven times that for England and Wales. The rates for the years 1923, 1924 and 1925 were the highest ever recorded among the industrial population. Although the figures compiled for the greater part of 1926 indicate a decline in the rate for that year, such declines from year to year in the past have proved to be only transitory and were followed in subsequent years by considerable increases. The homicide rate for the industrial population has shown a slight upward tendency during the sixteen year period 1911-1926, while the suicide rate has been almost halved.

The highest homicide rate among the white policyholders in the year 1925 was for the cities of Arkansas; then came in order Tennessee, Florida, Alabama, Nebraska and Oklahoma. The best record in the white industrial population was in Maine, and then in New Hampshire, Vermont, Delaware, Colorado and Oregon. Not a single homicide was recorded among the white policyholders in any of these six states, although 470,300 white persons were exposed to risk in them. The four Canadian provinces, New Brunswick, Manitoba, Saskatchewan and Alberta did not record a single homicide among their urban industrial population during 1925. In the colored industrial population the enormously high death rate of 115.2 per hundred thousand of population was recorded for Oklahoma; 78.2 for Minnesota; 66.1 for Michigan; 59.9 for Nebraska; 56 for Missouri; 53.9 for Illinois, and 50.5 for Florida. The lowest death rate for colored as well as for white policyholders was in New England. Considered by broad geographic regions, the highest homicide death rate in the white urban industrial population was 8.4 per hundred thousand in the East South Central region. The next highest rate was 8.2 in the West South Central states, and the highest rate in the colored industrial population was 52 in the West North Central states, followed by 49.7 in the East North Central states.—*The Journal of the A. M. A.*

WHEN SURGEONS BELONG TO LABOR UNIONS

When the White Collar union is fully organized, union doctors will leave operations unfinished should the whistle blow for quitting time before the victim has been sewed up; the Local or Throat Doctors will not be allowed to perscribe for any ailment above or below their territory and they will have to be accompanied by Mouth Doctors, who will be the only ones allowed to open and close the patient's mouth. Union undertakers will not be allowed to bury a non-union man; union grave-diggers will not dig his grave, and no union horse will pull his nonunion remains out there.

Union lawyers will refuse to try cases before nonunion judges. Prisoners will refuse to be hanged by nonunion sheriffs. Three juries will be necessary for a case, as each jury will be allowed to serve only an eight-hour shift.

Union stenographers will write only such letters as have been approved by the riding delegates. All words of more than two syllables will be barred and each letter must not be over three paragraphs. Union bank clerks will refuse to bother with anything smaller than $100 bills and riding delegates will collect 10 per cent of all moneys counted. Babies will have to take out cards in the Babies' union under penalty of being deprived of their milk, and will be allowed to play only with dolls that are members in good standing of the dolls' union, each having the union label.

But we fear the White Collar boys are wasting their time; their motto will always be, "United we stand for it—Divided we fall for it."—*J. P. McEvoy in Chicago Journal.*

UNDER MATERNITY BENEFITS EVERBODY SEEKS ASSISTANCE

Henry J. Harris writing about certain "maternity" benefits systems in certain foreign countries, "U. S. Department of Labor, Children's Bureau Publication, No. 57, p. 20, that in Australia (according to certain statistical sources quoted) "in the four calendar years, 1913 to 1916, there were 539,994 live births reported

and 539,255 births for which maternity allowances were paid," and that it costs in the same country (Ibid. p. 19), "when there were no extraordinary expenditures for war purposes, three per cent of the government's expenditure was devoted to maternity allowance." Surely needy maternity and child welfare cases can receive proper charitable attention, private or public, without such general pauperizing legislation.

The fact that local taxation (calculated to raise $1,000,000 in the county or $650,000 in Chicago) was being urged upon Illinois for an object that was not demanded by any of the public or private child welfare or charitable agencies, merely on the grounds that Illinois should be able to get a very little share out of a prospective "pot" into which she would be required to pay a great deal, caused the Civic Federation, first, to oppose the depending Federal Maternity legislation on the grounds that it tended to stimulate unnecessary local expenditure, and, second, to inaugurate an investigating into the whole field of federal "aids" to State and Local governments.—*Civic Federation of Chicago, Bulletin No. 43.*

THE APPARENT EXCESSIVE COST OF SICKNESS MAY LEAD TO STATE MEDICINE

The Business of Medicine

It is beginning to be felt that the business of the practice of medicine is becoming unusually burdensome to the profession. As expressed by some, the manufacturers of physicians' supplies are demanding excessive profits and that the physician must take into account this fact in rendering bills. Not a little complaint is made by the public of the size of the bills and no doubt this feeling lies at the foundation of many malpractice suits, especially counterclaims. But what can the doctor do? He must purchase books, he must secure the most recent instruments for diagnostic purposes and means of treatment, he must also have a car that people may respect and approve. All these are essential to secure a professional business and if the doctor does not transfer a part of these added expenses to the public he is himself liable sooner or later to become a charge upon someone. There are not a few who predict that the apparently excessive cost of sickness will in time lead to the state taking over the practice of medicine in some form. We all have a feeling that state control of medicine will reduce the position of the doctor to the servant status. No one, not even the sick public, would desire this; it would cause him to loose faith in the wisdom of his physician. We may listen to the complaints of the public on reading an interesting article, not long published, in the Atlantic Monthly on the "High Cost of Babies," in which it was said that her mother's babies cost, for the doctor $10, for the nurse $5 a week or $10 for the confinement period, and it was costing her for the first baby $50; for the last, $500. The writer could not understand why this was so. In the Long Island Medical Journal a patient was interested to know why she was charged $50 by a physician while a neighbor was charged $35 for a similar service.

These are questions the public are asking. On the other hand the doctor is asking why his margin of net profits are so small. Have we among us men of such wisdom as to make these questions clear? Will it be necessary for the state to do it for us?—*J. Iowa S. M. S., April, 1927.*

Correspondence

DOINGS FROM COUNCILOR DISTRICTS

Springfield, Ill., July 12, 1927.

To the Editor:

The two enclosed reports explain themselves, and I am hoping to have a short report from each of the counties in my district as to their activities, to be given to you for the Journal every month or two. This is for the purpose of stimulating interest in my district, also to get them in the habit of being interested in and reading the Journal.

S. E. Munson, M. D.,
Councilor, Fifth District, Illinois State Medical Society.

Clinton, Ill., July 5, 1927.

Dear Doctor Munson:

I think your idea of monthly reports of activities of the different societies in your district is a very good one, and I can see where it will create more interest in County Society activities in this District.

The DeWitt County Medical Society has gotten back on its feet again, after a long serious illness, and is up and doing things now, having interesting monthly programs, a part of which at least is furnished by our local society.

On June 17 we had a very fine meeting, with Dr. Channing Barrett of Chicago, who spoke on "Extra-uterine Pregnancy." Dr. Barrett is a most interesting speaker and was well received. Our Society deeply appreciates Dr. Hutton's committee for sending Dr. Barrett and Dr. Carr.

At our meeting this month the program will be given by the local society.

W. R. Marshall,
Sec'y. DeWitt County Medical Society.

Bloomington, Ill., July 6, 1927.

Dear Doctor Munson:

A goiter survey of the students of the Normal School was made by our Society under the direction of the State Department of Public Health, in January.

Recently we have had one of the nurses from the State Department at work under a committee from our Society to impress upon the moth-

ers the importance of breast feeding. We believe that this work has been of some value to the physicians, as she is able to keep the patient in touch with her family doctor. It is hard to estimate the results which will follow from an education campaign of this kind. We have no statistics to offer at the present time.

RALPH P. PEAIRS,
Sec'y. McLean County Medical Society.

Following are the statistics taken from the Department of Public Health of the Goiter Survery, made by Dr. Cook, of the Division of Child Hygiene:

	Boys	Girls
Total number examined	341	1158
Normal Thyroids	221	675
With Thyroids	120	483
Per cent with Thyroids	.35	.42
Degree of Enlargement:		
Type I	82	379
Type II	35	81
Type III	3	22
Type IV	..	1

ST. MARY'S HOSPITAL (QUINCY) WEEKLY CLINICAL CONFERENCE*

Quincy, Ill.

For some years several Quincy physicians have desired to inaugurate a regular clinical meeting for the presentation to the profession the clinical material of the community. Several meetings were held to consider the formation of a Clinical Society to take over this work, but for various reasons we were unable to get it started. To create enthusiasm for the plan we invited physicians from cities where regular clinical meetings were being conducted successfully to address the Adams County Medical Society on the subject, but the general membership were still loath to accept the wisdom of such a plan.

In January of this year the author was elected president of the staff of St. Mary's Hospital of Quincy. In appreciation of the honor he gave a dinner to the staff members at his home, and on the occasion proposed that the staff of the hospital inaugurate a Weekly Clinical Conference in the same manner as had been advocated by Dr. G. Henry Mundt, of Chicago, President of the Illinois State Medical Society.[1] The suggestion immediately appealed to nearly everyone present. It was further discussed and adopted at a later staff meeting. On Saturday, February 19th, the first conference was held and 31 doctors were present. A questionnaire distributed at the close of that meeting showed that every one present was highly pleased with the idea and 90 per cent approved of the day and hour suggested when the meetings should be held (Saturdays at 8:00 A. M.).

Meetings were held regularly each week until June, when we disbanded for the summer. There have been 15 meetings to date. The maximum attendance has been 32 and minimum 20, making an average for each meeting of 26.1 per cent. They last one hour and begin and end promptly. The programs have largely been contributed by members of the staff of St. Mary's Hospital, but any physician doing work in St. Mary's Hospital is privileged to make presentations. The programs are all clinical. Formal papers are barred. What we aim to present is interesting cases, demonstrations, case reports, etc., and an endeavor is made to present the patient whenever possible. All the meetings are held at the hospital, but it is not necessary that the patients be in the hospital. In fact many patients shown have been treated in other institutions—or perhaps never were treated in a hospital at all.

Physicians are urged to volunteer presentations, but as a rule they have to be "asked." The officers of the staff are the committee in charge of the conference and they arrange the program, etc. As a rule three presentations make an ideal number of a one hour clinic. Liberal discussions after each presentation are invited. Post card notices detailing the program are sent to every ethical physician in the county on Thursday of each week and posted on the hospital bulletin board. We insist that the program (for each week) be in the hands of the committee by the Tuesday morning preceding the meeting. There are no dues of any kind connected with the conference, the hospital paying the only expense, that of mailing the post card programs each week.

Up to date the physicians of Quincy have thoroughly enjoyed this Clinical Conference. This is best proven by the steady attendance record. Doctors will not get up early to spend an hour in this manner, week after week, unless it proves profitable to them. The Clinical Conference of St. Mary's Hospital is a complete success and fills a long felt need in this community.

HAROLD SWANBERG, M. D.
731 Hampshire Street.

*This was written at the request of Dr. G. Henry Mundt, who urged that our experience might be of interest to others who were considering the adoption of the hospital clinical conference idea.

1. Mundt, G. H.: Weekly Clinical Conference, Illinois M. J., 50:467, Dec., 1926.

Original Articles

NASAL ACCESSORY SINUS DISEASE

A Survey of Available Treatment Methods with Special Reference to Physical Therapy*

A. R. Hollender, M. D.
Attending Otolaryngologist, Lutheran Memorial and American Hospitals.

AND

M. H. Cottle, M. D.
Attending Otolaryngologist, Illinois Masonic Hospital, Attending Ophthalmologist Lutheran Memorial Hospital.

CHICAGO

Physicians who are practicing in fields other than rhinology are now more than ever alert in recognizing pathological conditions in the nose and appreciate better the role of sinusitis in generalized infections and systemic disorders. The internist and the pediatrician particularly are frequently called upon to determine the source of some latent infectious process. Because of this, greater attention is being directed to obvious and obscure nasal foci, and many clinicians and investigators have directed their best efforts to a study of the etiological factors and improved methods of treatment.

Etiologic Considerations. The most important factor in the causation of nasal accessory sinus disease is an interference with normal aeration and drainage of the sinus involved. This may be due to inflammatory processes or mechanical obstructions in the nose, such as septal spurs and deviations, polypi and hypertrophied turbinates. Extension of disease by contiguity through the nasal membranes or teeth is also of common occurrence.

In reviewing the etiology of nasal accessory sinus disease one must recall also its prevalence, concurrently or as a sequela to many systemic disorders, especially those in which acute respiratory involvement is of great significance. Influenza in the adult and the exanthemata in children are the most important diseases falling in this class.

Interesting indeed are the findings of Darling who observed acute inflammatory changes in the sinuses, due to the pneumococcus, in more than 90 per cent. of a series of pneumonia cases in which post mortem examinations were performed. Darling, therefore, concluded that the portal of entry of the pneumococcus in most instances is an accessory nasal sinus, the mucous membrane of which is probably fitted for the reception of the pneumococcus by an antecedent influenza or rhinitis.

Some investigators have isolated pneumococci from the middle meatus of the nose of pneumonia patients. Felty and Heatly demonstrated this finding in sixteen cases of lobar pneumonia. Seven of these gave definite roentgenologic evidence of sinus disease. These workers as well as others engaged in similar studies are as yet doubtful whether the paranasal sinusitis precedes, or develops concurrently with the lobar pneumonia.

There are several distinct processes by which the mucous membrane of the accessory sinuses may become diseased. Skillern summarizes these under six headings thus: 1. Through direct infection of the healthy sinus by pathogenic bacteria. 2. Through extension of inflammation from neighboring parts. 3. Through the blood and lymph channels. 4. Through traumatism—exposure to cold, sea bathing, auto riding, etc. 5. Through foreign bodies. 6. Through contamination from the pus of overlying sinuses.

Recent observations by Dean and his associates on the influence of vitamin deficiencies in producing respiratory infections in infants and young children are now of considerable interest and must be borne in mind when dealing with this subject. These observations have been made on animals and confirmed in clinical practice. In this connection, also, the relationship of endocrine balance and the metabolism of the body as a whole are pertinent etiologic factors.

Unlike other parts of the body the nasal accessory sinuses present certain problems which are dependent in a large measure on the anatomic characteristics present. Among these are the number and position of normal and accessory ostia and the presence of bony septa within the sinus.

Local Symptoms. The two cardinal signs of chronic nasal sinusitis are pain and a colored nasal discharge. The former is commonly present, but a profuse nasal discharge is quite commonly absent. Pain may be localized over the sinus but is more often referred to other parts of the head. Thus an antrum infection may produce pain within the eye of the same side. Sphenoid and ethmoid disease often produce pain

*Read before the North Shore Branch, Chicago Medical Society, May 2, 1927.

within the head or in the occipital region. The headache may be continuous or intermittent. It is usually described as a dull, heavy ache or fullness in the head. If the frontal sinuses are affected this ache may be supraorbital. At times,

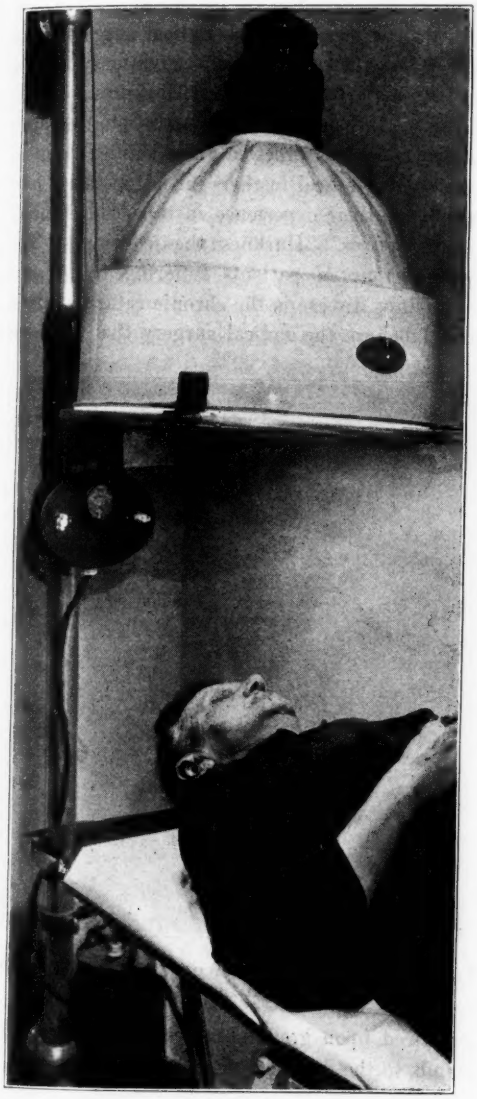

Fig. 1. Application of radiant heat-light to the head and face for acute sinusitis.

however, the headache is indefinite so far as situation is concerned.

Patients complain of recurrent colds of long duration. The throat is dry and parched, a pathognomonic symptom of sinus infection.

The symptoms of acute sinusitis are too well known to detail. They vary according to the severity of the attack. The headache or pain and tenderness over the frontal or maxillary sinuses are characteristic. The nose is at first blocked and little or no ventilation is possible. Later the discharge may become blenorrheic. Systemic symptoms, malaise and fever are common.

Systemic Effects of Nasal Sinusitis. The systemic symptoms may be due to the sinus infection itself or to secondary affections, the most common of which are in the bronchial tubes. The bronchial mucosa is constantly reinfected from post nasal dripping. The result is a chronic bronchitis.

Among the more common systemic conditions

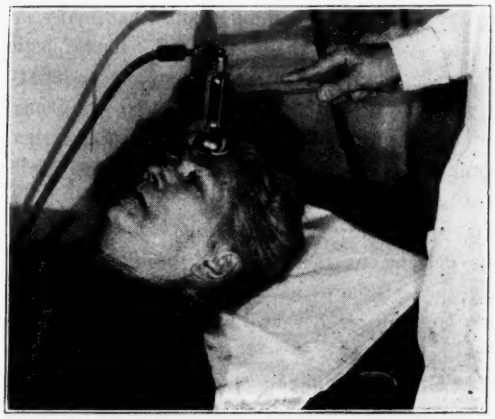

Fig. 2. Modified diathermy.

which occur with sinus disease is asthma. Numerous cases are on record. It cannot be disputed that there is a direct relationship between asthma and nasal infections, nor can it be denied that many asthmatics are cured by the eradication of existing sinus involvement.

The deleterious effects of sinus disease on the body in general is now thoroughly recognized. It can therefore be stated that sinusitis plays as great a rôle in systemic disturbances as the tonsils, the teeth or other foci in the body, apparent or obscure.

Pathology. Important and interesting are the pathological changes which occur in the mucous membrane of a diseased sinus. This phase of the subject could be dealt with at great length, but time will permit only of some brief remarks.

The changes vary with the degree of inflammation and the duration of the infection. The type of infecting organism and the drainage conditions will also influence the extent of the tissue changes. In many instances resolution takes place by the absorption of the exudate within a few weeks. When such is not the case, the inflammation is transformed from the catarrhal to the purulent type, and now if resolution is interfered with, permanent chronic changes in the mucosa occur. These include the formation of scar tissue and polyps, and what is most important is the replacing of the normal ciliated epithelium by a low columnar or squamous type.

Pus is not always present in a diseased sinus. It has been noted by careful observers and stated by us in earlier communications that many sinuses in which there are only hyperplastic changes, often give severe primary or secondary symptoms or both. This has been confirmed when operation was performed. Again, irrigation of the antrum, for instance, frequently fails to show the presence of pus in the return fluid. One or two things may be true. Either no pus is contained in the cavity, or the secretion is of such consistency that it cannot drain through the antrum trochar or through the natural antral ostium.

Available Treatment Methods. Until quite recently the available treatment methods for acute sinusitis consisted chiefly of shrinkage of the turbinal bodies, lavage of the nasal cavity with hot solutions, the use of contact heat from hot water bottles and the administration of opiates or coal tar products for the relief of pain. Systemic measures such as purging, rest in bed, restricted diet and proper hygiene have been and are still helpful adjuvants.

Suction is resorted to, and often also, in antrum infection, irrigation of these cavities is performed. Resolution frequently occurs either during the acute stage or shortly thereafter. If, however, resolution does not occur and the disease lapses into chronicity, a difficult problem presents itself. Conservative treatment fails and radical operative procedures occasionally become necessary. The fact that post-operative results are frequently poor has taught many rhinologists to be reluctant in regard to radical surgical intervention, and doubtless many more would be equally so, if some form of conservative treatment could be substituted which would offer improved results. When the indication is definite, such as the presence of polyps and other new growths, or bone necrosis, radical surgery alone will suffice. In relating his observations on sinus disease in private practice, Harkness recently stated: "It has been my observation that men entering private practice from clinical centers become less radical in their initial operative procedures as their experience in this field of practice progresses." Harkness then continues, "The largest group of patients suffering from paranasal sinus disease is the chronic catarrhal class. And I believe the radical surgery that has been practiced upon great numbers of these patients stands to the discredit of our profession."

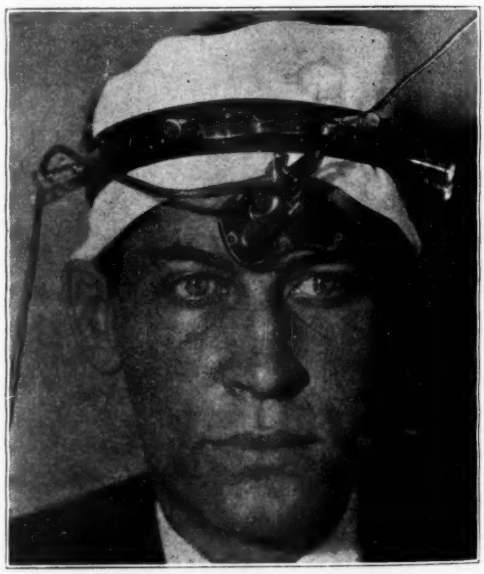

Fig. 3. Direct diathermy—Active electrode over frontal sinus.

Conservative Therapy. The rhinologist must of necessity seek further for more successful therapy for sinus disease. The use of argyrol tampons in the nose as suggested by Dowling is valuable, and while it is effective in numerous instances in giving relief to the patient, it does not reach the sinus mucosa, nor is it able to produce restitution of the thickened and fibrosed

membrance. The effectiveness of the Dowling treatment in relieving symptoms is most pronounced in acute inflammations and is greatly enhanced by the use of radiant heat-light over the face while the tampons remain in the middle meati of the nose.

In acute sinusitis we have found that the application of radiant heat-light to the head and face is the treatment of choice. (Fig. 1.) It reduces the congested state of the nasal and sinus mucosa and obviates the use of analgesic drugs. The action is so definitely sedative that frequently the patient will fall asleep under the light and awaken greatly relieved.

Indirect diathermy is preferred by some in acute sinusitis. It is not contraindicated at any time, even though there may be pus present in the sinus cavity. On the contrary, drainage is promoted by this method of treatment. Certainly it relieves pain and thus obviates the use of analgesics or local medication to the nasal membranes. The use of intranasal diathermy for acute sinus involvement is often ineffective in producing any result. The inflamed membrane becomes more markedly congested and the general symptoms aggravated. In some of our patients on whom we attempted intranasal diathermy we observed this aggravation of all local and general symptoms for several hours after the treatment.

Employment of a vacuum or non-vacuum electrode over an infected frontal sinus or antrum sometimes gives relief, but in general is of little value. An improved technic is so-called modified diathermy, a biterminal method in which the autocondensation pad is the indifferent electrode, and the vacuum or non-vacuum, the active one over the involved sinus. (Fig. 2.) Results with this procedure have been fair in selected cases when direct diathermy was for some reason inadvisable or contraindicated.

SUBACUTE AND CHRONIC NASAL ACCESSORY SINUS DISEASE

If ventilation and drainage of the nose are interfered with by septal spurs and deviations or enlarged middle turbinates surgery is essential. If pus is present in a sinus such as the antrum, for instance, irrigation cannot be replaced by any known method.

Diagnostic irrigations of these sinuses will often yield no macroscopic pus, yet transillumination and the roentgenogram show an opacity of the diseased sinus in distinct contrast to the uninvolved one on the opposite side. Our experience in a large series of these cases has borne out the value of applying direct diathermy. The difficulties of giving diathermy directly to the frontal sinus and to the antrum, have been overcome by the use of our headband and special electrodes. The active electrode is placed over the frontal sinus (Fig. 3) or the antrum (Fig. 4) as the case might be and the indifferent electrode is adjusted to the nape of the neck. (Fig. 5.) Twenty minutes of diathermy by this method at comfortable tolerance is followed by negative galvanism for five minutes through the same electrodes.

Fig. 4. Active electrode over antrum.

Of several interesting cases which have been treated by us during the past few years, the following are characteristic:

Patient, E. H., female, aged 24 years, laboratory technician. Disease of left antrum for four years. Submucous resection of nasal septum performed by her physician shortly after acute attack which came on with the grippe. Several antrum irrigations without result. Part of the middle turbinate on left side was resected to improve intranasal drainage with some slight favorable change. X-rays of teeth and sinuses were made. Left maxillary antrum radio-opaque. No dental pathology. Irrigation of antrum gave return

of clear fluid. Symptoms present were neuralgic pains on left side of face and some tenderness over sinus itself. Direct diathermy was given over left antrum three times weekly. General ultraviolet irradiations were advised in addition, because patient was weak, irritable, had poor appetite and was losing weight. This patient required three months of active treatment, but finally was permanently relieved. One year has elapsed with no recurrence of symptoms.

Patient, M. J., male, aged 35 years, accountant. Nose negative. Ample ventilation with no apparent obstructions. Complaint, pain and tenderness over the left eye for two years. The pain was intermittent in character, but the tenderness was always present. Symptoms were more pronounced in cold weather. Roentgenogram showed veiling of left frontal sinus which was much smaller than the frontal sinus on the right side. No nasal discharge. Breathing was free. Direct diathermy applied over left frontal sinus three times weekly. After two weeks pain was relieved, but tenderness persisted. The latter symptom required two months' treatment before complete absence was noted. No recurrence of pain or tenderness after fourteen months.

Ethmoid and Sphenoid Sinuses. The ethmoid and sphenoid sinuses present the most difficult problem and because the results have not been as favorable as those obtained in the frontal or antrum areas, it is questionable whether these sinuses can be thoroughly diathermized by our present methods. We thought at one time that a diathermy effect in the ethmoid and sphenoid regions could be obtained by placing electrodes of equal size on each side of the face. While some heat generation is effected in the middle of the head, the amount that actually reaches the desired regions is probably insufficient to produce a physiologic response. Some favorable results have been observed in a few cases with this method, but in general we do not feel that the plan is quite satisfactory or dependable enough to warrant its recommendation. The action of intranasal diathermy on the ethmoidal cells has likewise been unsatisfactory.

In hyperplastic ethmoiditis or in polyp formation in the ethmoidal sinus, the value of surgery can be greatly enhanced by the auxiliary use of surgical diathermy.

Action of Diathermy. Diathermy produces a heating effect within the tissues. The depth of this action is dependent on the method of application. In the application of diathermy for sinus disease the direct method is one of choice in chronic cases. It is analgesic in acute, subacute and chronic involvements, lessens symptoms by its ability to produce local hyperemia and improve the circulation to the part, and aids indirectly in the removal of waste products. Diathermy tends to soften tissue. By virtue of this the resolvent action on the fibrosed and thickened sinus mucosa can be explained.

Negative galvanism aids primarily in augmenting this latter effect and therefore is an important physical adjuvant.

INTRANASAL GALVANISM AND ULTRAVIOLET LIGHT

In some cases when much local disease of the nasal membrane is present which constantly hinders favorable changes of the sinus mucosa, results may be hastened by the auxiliary use of either ultraviolet light from the water-cooled lamp or zinc ionization. Ultraviolet light is indicated in the milder infections which are more superficial in nature. An improved technic for

Fig. 5. Indifferent electrode applied to nape of neck.

intranasal ultraviolet irradiations involves the use of a bilateral nasal speculum for direct raying of the nasal mucosa. (Fig. 6.) The effect is a sterilizing one. It is, however, unreasonable to assume that ultraviolet irradiations intranasally will reach sinus disease. Obviously this cannot occur unless it is possible to expose the sinus mucosa to the ultraviolet light or else to carry a quartz applicator into the sinus cavity.

When the nasal mucus membrane is chronic-

ally inflamed, favorable action can be had by zinc ionization. The technic consists of packing the nose with long strips of gauze which have first been made wet with a zinc solution (one grain zinc sulphate to the ounce of water). The packing must cover as much of the nasal mucosa as possible. One side of the nose is done at a time. When the nasal chamber is properly packed a flexible wire leading from the galvanic apparatus (positive pole) is introduced into the wet gauze and held in place by some cotton fixed snugly at the nasal opening. The indifferent or negative electrode consists of a pad which has been moistened in warm water and applied to the forearm or some other exposed body surface. When both electrodes are in place the current is turned on as the circuit is now complete. From 6 to 10 ma. of current are employed, but never an amperage beyond the patient's tolerance. Ten minutes of ionization treatment suffices.

Within 24 hours definite changes in the nasal mucosa can be observed. The turbinates are definitely smaller in size with resultant increase

Fig. 6. Direct raying of nasal mucosa employing bilateral nasal speculum.

of space and improved ventilation and drainage. Sometimes, however, within the first 24 hours, congestion of the nasal membrane occurs and general symptoms of malaise but these disappear on the second day.

If a suitable artificial opening to a diseased sinus has been made during a previous operation, the wet zinc packing can be introduced into the sinus cavity, and when this is possible, zinc ionization in itself will often prove an extremely valuable procedure.

SUMMARY AND CONCLUSIONS

1. Numerous developments during the past few years, in the diagnosis and treatment of nasal accessory sinus disease, have favorably augmented the results obtained in various local and systemic diseases.

2. Drainage is the all important problem.

3. It is as yet doubtful whether the paranasal sinusitis precedes or develops concurrently with the systemic infection.

4. The nasal accessory sinuses present certain other problems which are dependent in a large measure on the anatomic characteristics present.

5. The local and systemic symptoms vary with the type of infecting organism and the duration and severity of the disease.

6. Certain affections such as bronchitis and asthma are definitely related to nasal accessory sinus disease.

7. The pathological changes which occur in the mucous membrane are easily transferred from the acute to the subacute or chronic stage.

8. The presence of pus in a sinus cavity may produce severe symptoms, but such symptoms may be present with nothing more than a hyperplastic thickening of the sinus mucosa.

9. Classical shrinkage and systemic measures frequently arrest an acute or subacute sinusitis.

10. When a sinusitis becomes chronic and persists for an indefinite period, radical procedures must be resorted to because conservative treatment succeeds in only a small percentage of patients.

11. In acute sinusitis radiant heat light to the head and face, or indirect diathermy over the sinuses, relieves the acute symptoms and frequently obviates the use of analgesic drugs.

12. In subacute and chronic sinus disease, direct diathermy, properly applied, is the method which thus far has given the most satisfactory results and therefore is a decided advance in sinus therapy.

13. Intranasal galvanism and ultraviolet energy from the water cooled quarz lamp are important and valuable physical adjuvants.

30 North Michigan Avenue.

HODGKIN'S DISEASE — ABDOMINAL TYPE. REPORT OF A CASE WITH PRIMARY INVOLVEMENT OF THE RETROPERITONEAL GLANDS*

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The internal type of Hodgkin's disease, while perhaps not as rare as is commonly thought, is nevertheless, of unusual interest because of its relative infrequency and because of the many interesting problems encountered in its diagnosis. In this type the glands of either the thorax or the abdomen, or both, may be involved, the one group of glands usually being affected at an earlier date and to a greater extent than the other. The external glands in either case may be involved secondarily—enlargement of the cervical and axillary nodes supposedly following a primary thoracic process, and enlargement of the inguinal nodes being secondary to a primary abdominal process. This is exactly the reverse of the train of events that may occur in the ordinary external type of Hodgkin's disease, which is usually characterized by a progressive, painless enlargement of the cervical, axillary, and inguinal glands, with a later involvement of the mediastinal or abdominal glands. In both the external and the internal type there is ordinarily fever and anemia.

In the differential diagnosis of Hodgkin's disease the more common maladies to be considered are the infectious granulomata—tuberculosis and syphilis, the true neoplasms, which are usually sarcomatous in nature, and the leukemias. Although these diseases will not be discussed here, it may be mentioned that tuberculosis is one of the confusing conditions that most frequently enters into the differential diagnosis. Intensive investigation as to the part played by the tubercle bacillus in the causation of this disease began seriously with the studies of Sternberg in 1898. He contended that Hodgkin's disease was a form of tuberculosis, but later on, his own studies, and more recently those of others—particularly the American investigators—have conclusively demonstrated that the tubercle bacillus is purely a secondary invader of the diseased structures, and in no sense a causative agent. In this rôle it is probably found no more frequently than many of the other organisms, which at one time or another have been suspected of being the cause of the disease.

The significant feature in the writer's case was the involvement, first, of only the retroperitoneal glands. Such an involvement as an initial symptom is exceedingly rare; when it occurs before other glands become affected, it may be referred to as "isolated glandular enlargement" or "localized Hodgkin's disease," which later becomes generalized. Williamson,[1] in recording a case of this type, lays emphasis on its rarity and the difficulty of diagnosis. In his case the diagnosis was not made until one of the inguinal glands became enlarged and was examined microscopically.

The interesting features in the case here reported are: (1) That the symptoms were mainly of the gastro-intenstinal type and strongly suggested duodenal ulcer; (2) that enlargement of the axillary, cervical, and inguinal nodes did not appear until three months after operation for the primary retroperitoneal growth, at which time deep x-ray therapy was begun; (3) that, with the involvement of the external glands, the wrists became much swollen, and very tender and painful, and there was a rapid extension of this inflammatory process to the ankles and knees. This joint involvement, which was of significant interest in the case, suggests that the disease may be of an inflammatory and infectious nature. Furthermore, the case serves to emphasize the necessity of appreciating the fact that enlargement of the cervical lymph-nodes is not always the first manifestation of this affection. Symmers,[2] from a study of 15 cases of Hodgkin's disease, concludes that we must relinquish the conception that this disease is most commonly shown by enlargement of the cervical lymph-nodes. In his series the affection revealed itself frequently as an enlargement of the abdominal and thoracic lymph-nodes. He claims that the brunt of the attack is borne by the nodes of the abdomen, thorax, neck, axilla, and groin, and by the auxiliary lymphoid systems in the spleen and liver.

It is interesting to note that the first case of the disease described by Hodgkin[3] appears to be an example of the internal form. The patient was a boy, aged nine years, whose abdomen was distended with ascites; the bronchial and abdominal glands were greatly enlarged and much

*Read before a meeting of the Philadelphia County Medical Society, January 13, 1926.

indurated. Dreschfeldt,[4] in 1892, described 3 cases of acute Hodgkin's disease, in 2 of which there was no enlargement of the external glands. Since that time cases of the abdominal type have occasionally been reported; in these, the diagnosis was only made after external glands became involved, or at necropsy.

CASE REPORT

A clerk of Jewish extraction, aged forty-six years, married, when seen on September 2, 1924, stated that he had suffered from "indigestion" for years. For the past three months he had been subject to attacks of sharp, cutting pain across the upper abdomen and localized pain in the epigastrium. The attacks came on about three hours after eating, and were relieved by taking food. He had frequent nocturnal attacks which awakened him. The appetite was good. The bowels were constipated, the stools being of the spastic type; they were normal in color and contained no blood or mucus. Occasionally there was vomiting in the morning; the vomitus did not contain food or blood. During the past three months the patient had lost 18 pounds; this he attributed to the fact that he was afraid to eat. Except for the indigestion, he had always enjoyed good health. He used tobacco and alcohol moderately; he had never had any venereal disease. His mother died of "cancer of the uterus"; otherwise the family history was of no significance.

Physical examination revealed a fairly well-nourished man, who had some carious teeth, and diseased tonsils. The scleræ were clear; the pupils were equal and reacted to light and accommodation. The heart and lungs were negative. The upper part of the abdomen was distended, and there was very definitely palpable in the epigastrium a distinct nodular mass, firm and slightly tender. The spleen did not appear to be enlarged; the liver extended about 1 inch below the costal border. There was no ascites. Possibly the right inguinal glands were slightly enlarged; no other glandular involvement could be detected. Proctoscopic examination was negative. The temperature was 98° F., the pulse 80, the blood-pressure 118 systolic and 74 diastolic. The weight was 148 pounds.

The urine was amber, flocculent, acid, with a specific gravity of 1.033 and a faint trace of albumin; there was no sugar and no acetone. The morning and evening specimens showed a large amount of indican. There were some hyaline casts, much mucus, some leukocytes, an occasional pus-cell, and a few epithelial cells.

The feces were yellow, apparently normal, with a faintly alkaline reaction. They contained a small amount of unchanged starch; the protein and fat digestion was apparently normal. There were no ova or parasites; no blood, free or occult, was found, and only a very little mucus which was well mixed. The bacteria were entirely Gram-negative, B. coli predominating, with a few B. mesentericus, a few long slender bacilli in chains, and an occasional spore.

The blood-count showed: red blood-cells, 4,210,000; leukocytes, 5,200; hemoglobin, 75 per cent. Unfortunately, a differential count was not made at this time.

A fractional gastric analysis revealed nothing of significance.

The Wassermann reaction, on October 2, 1924, was negative.

Roentgenologic examination of the gastro-intestinal tract three months before the patient was first seen by the writer showed a defect of the duodenal cap, which was thought to be due to some outside pressure rather than to ulcer. A second roentgenologic examination of the gastro-intestinal tract, made by Dr. Ralph Bromer four months later, showed a slight enlargement of the right kidney. The twenty-four and forty-eight-hour examinations revealed stasis in the transverse colon and moderate spasticity. With the patient in the prone position, the lesser curvature of the stomach appeared to be circular in outline. The roentgenologist thought this was caused by the mass that could be felt clinically; he was certain that an enlarged right kidney could not cause this appearance, and believed that an enlarged liver afforded the most plausible explanation. The x-ray examination of the teeth showed no infection, but there was an unerupted left upper molar.

The preoperative diagnosis was retroperitoneal sarcoma.

The patient was operated upon on November 4, 1924, at the University of Pennsylvania Hospital, by Dr. George Müller. When the abdomen was opened through a left rectus incision a large retroperitoneal mass was seen, which extended from the lesser omental cavity to below the trans-

verse mesocolon, and had pushed the stomach and liver forward, causing some obstruction at the duodenojejunal junction. This obstruction no doubt caused the initial gastro-intestinal symptoms which suggested duodenal ulcer. The presence of kinks and bands angulating and constricting the duodenojejunal juncture, and thereby producing a characteristic picture of peptic ulcer, has recently received considerable attention. There were many extensive glandular metastases in the peritoneum. One of the glands was removed for examination, the report on it being as follows: A frozen section of the lymphoid tissue shows it to be in a hyperplastic state. The capsule is slightly thickened, and shows no cellular invasion of its meshes by lymphoid tissue. The germinal centers are large and numerous. The lymphoid sinuses contain lymphocytes and endothelial cells.

Diagnosis: Hyperplasia of the lymphoid tissue.

Unfortunately this examination was confined to sections of frozen tissue only. The lymphoid hyperplasia, however, is usually the only histologic change noted at an early stage, not only in Hodgkin's disease, but also in streptococcic, tuberculous, actinomycotic, and other infections of the lymphatic apparatus. Again, excessive fibrosis may be the only finding in a gland which has been long affected by the disease. This may be so extensive as to destroy the characteristic histologic picture observed during the course of the disease.

On November 19 the patient returned for x-ray treatment, which was given in four courses by Dr. Pancoast and Dr. Pendergrass. These courses covered the periods from November 19 to December 2, 1924; from January 5 to January 14, 1925; and March 2 and 3 and April 7 and 9, 1925 (See Table I).

After the second course of treatment the original retroperitoneal mass was not palpable.

The patient returned on February 21, 1925, three months after operation, complaining that all his joints were aching; the wrists and ankles were swollen and tender. The first joints to be affected were the wrists, and the involvement then spread to the knees and ankles, which were stiff and painful. The patient stated that he had had a similar attack, though not so severe, earlier in the winter. Examination now revealed that the posterior cervical, axillary, and inguinal glands were all enlarged. They were freely movable, not tender, were not attached to the skin, and showed no evidence of breaking down. The patient stated that the left axillary glands had first begun to increase in size two days previously and the enlargement of the others followed rapidly. His weight at this time was 142 pounds (6 pounds less than on first examination). A cervical gland was removed for microscopic examination. The report of Dr. A. J. Bothe on this was as follows:

Gross examination: Specimen consists of a lymph-gland about the size of a small white bean. On section it is found to be well encapsulated, pinkish-white in color, and does not bulge.

Microscopic examination: Sections show loss of the lymph-gland architecture. The capsule is slightly thickened, and there is no evidence of cellular invasion. There is a fairly diffuse infiltration into the lymphoid tissue by columns of cells of two types; some of these appear as fibroblasts, while the majority are of the endothelial

TABLE 1

Date	Minutes	Milli-amperes	Kili-volts	Filter	Focal distance	Portals	Milliampere minutes	Location
FIRST COURSE:	75 each	4	200	Al. mm. 1 Cu. mm. 5	50 cm.	3	300 each	Abdomen anteriorly. Lumbar region, right and left.
1924 November 19th to December 2d.								
SECOND COURSE:								
1925 January 5th. to 14th.	75 each	4	200	Al. mm. 1 Cu. mm. 5	50 cm.	3	300 each	Abdomen, right and left, slightly oblique. Lumbar region posteriorly.
THIRD COURSE:								
1925 March 2d. and 3d.	11 each	5	130	Al. mm. 3 Glass mm. 1 Wood mm. 3/8	24 cm.	5	55 each	Cervical region, right and left. Axillæ, right and left.
FOURTH COURSE:								
1925 April 7th.	11 each	5	120	Al. mm. 3 Glass mm. 1 Wood mm. 3/8	24 cm.	4	55 each	Cervical region, right and left. Axillæ, right and left.
April 9th.	50 each	4	200	Al. mm. 2 Cu. mm. 5	50 cm.	1	200 each	Abdomen anteriorly.

type. There are scattered throughout the entire section a number of giant-cells, which are fairly large, and contain from 2 to 4 centrally placed nuclei. The prevailing cell in the section is the mature lymphocyte. While there are no eosinophils present, the loss of architecture in this tissue, the presence of fibrosis, the proliferation of endothelial cells, and the presence of Dorothy Reed cells and polymorphonuclears suggests that we are dealing with a Hodgkin's type of pathology.

Diagnosis: Hodgkin's type of lymph-glands (Figs. 1 and 2).

This report was confirmed by Dr. J. L. Goforth and Dr. Allen J. Smith.

Examination on April 2, 1925, showed that the glands of the left axilla, which at the former examination were more markedly enlarged than those of the right side, were still further increased in size, and the submaxillary supraclavicular, and anterior cervical glands were involved. The glands above and below Poupart's ligament were much increased in size. The spleen was not palpable, there was no fluid in the abdomen, and the area of liver dullness was slightly enlarged. The joints of the hands, ankles, and knees were swollen and tender. During the months of January, February, and March of this year (1925) the patient suffered every night from backache, chilliness, and fever. He stated that his joints first troubled him in May, 1924, when the hands and wrists became swollen and stiff. The acute condition of the joints, which suggested acute rheumatic fever, lasted from January 15th to March 15th. The patient's digestion was apparently normal, but easily deranged.

On April 16, two weeks later, the patient reported that he felt well, except for the stiffness still persisting in all the joints. He had lost 9 pounds and was growing weaker. The left foot and ankle were slightly swollen. Fowler's solution was prescribed at this time, but because of an idiosyncrasy he was unable to continue it. The cervical, axillary, and inguinal glands were still enlarged, though they had decreased somewhat in size since the x-ray treatment. Whether or not this was the result of the treatment can only be surmised, as great variation in the size and consistency of any of the involved glands may occur during the natural course of the disease. The enlargement of the axillary glands was still somewhat greater on the left side than on the right. The inguinal glands were enlarged on both sides, but more so on the right. The spleen and liver were not palpable, but on percussion the lower border of the liver still extended two finger-breadths below the costal border. The upper border of the liver was normal. There was no ascites.

On May 15, 1925, the tonsils were removed by Dr. George Fetterolf. They were small, but very septic, and behind the posterior pillars there was found a mass of infected lymphoid tissue. Unfortunately no bacteriologic or histologic examination was made of the removed tonsils. This would have been interesting because of the strong suspicion that the throat and tonsils may serve as a portal of entry for infection, since the disease often starts in the cervical glands. There is substantial convincing evidence in the work of

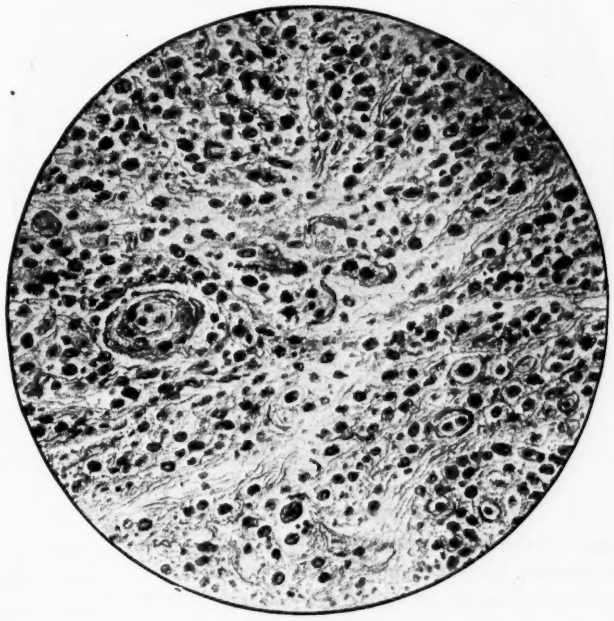

Fig. 1. High power.

Section of lymph-gland showing: 1. Loss of architecture. 2. Diffuse fibrosis. 3. Proliferation of endothelial cells. 4. Presence of polymorphonuclear leukocytes. 5. Multinucleated giant-cells (Dorothy Reed cells).

Bunting, Yates, Rosenow, Billings, and others, that this disease is produced by a specific organism, a diphtheroid bacillus and an ameba being the last to claim this distinction, and that consequently it is an infectious granuloma. Dr. Allen J. Smith, who has been examining sections of glands affected with Hodgkin's disease and supposed to contain these amebae, states that he has been unable to find them.

From June 5, 1925, to August 25, 1925, the patient received Coley's serum in increasing doses up to 5½ minims. He refused injections beyond this point because of the reaction. During this interval the stiffness, pain, and swelling of the

Fig. 2.—Low power.

joints entirely disappeared, and, to use his own expression, he felt "completely rejuvenated."

On September 10, 1925, he reported that he had been suffering desperately from an itching, which began on the legs. Later it was localized to the abdomen, then the chest, and now to the head and neck. No structural change in the skin could be detected. Pruritus is a common manifestation of this disease, especially during its acute exacerbations. In this case a considerable diminution of the eosinophil cells in the blood occurred, with a temporary spontaneous alleviation of the pruritus, a symptom which usually appears early and is difficult to control. For some weeks during the period of joint involvement a record of the temperature was kept. It varied from 96° to 101° F., and was of an irregular type, the afebrile periods being considerably longer than the febrile. Pyrexia is a fairly constant phenomenon in this disease, and may be irregular, intermittent, or relapsing in its course. It may represent the secondary infection of the lymph-nodes, which is frequently known to develop, or it may be the result of a specific toxemia.

The anemia, which is always associated with Hodgkin's disease, is one of its characteristic features. In this case the bloodcounts were as follows: (The first three counts were made during the period of joint involvement.)

February 2, 1925: Red blood-cells 3,900,000; white blood-cells, 7,500; hemoglobin, 65 per cent.; polynuclears, 53 per cent.; small lymphocytes, 5 per cent.; large lymphocytes, 25 per cent.; large mononuclears, 1 per cent.; transitionals, 8 per cent.; eosinophils, 8 per cent.

March 3, 1925: Red blood-cells, 4,450,000; white blood-cells, 14,400; hemoglobin, 67 per cent.

December 31, 1925: Red blood-cells, 4,090,000; white blood-cells, 9,400; hemoglobin, 74 per cent.; polynuclears, 82 per cent.; large lymphocytes, 11 per cent.; transitionals, 2 per cent.; eosinophils, 5 per cent. Blood-sugar, 124.1 mg.; blood-urea, 12.2 mg.; non-protein nitrogen, 27.1 mg.; icterus index, 10.

January 6, 1925: Red blood-cells, 4,100,000; white blood-cells, 8,600; hemoglobin, 78 per cent.; polynuclears, 52 per cent.; small lymphocytes, 4 per cent.; large lymphocytes, 28 per cent.; large mononuclears, 2 per cent.; transitionals, 4 per cent.; eosinophils, 10 per cent.; blood-platelets, 448,000.

These examinations presented the usual findings, namely, anemia of the secondary type, a slight absolute leukocytosis, and an increase of the eosinophil cells. Later there was a marked polynuclear leukocytosis, eosinophilia up to 16 per cent.; and increase of the blood-platelets

to 448,000. Ordinarily the leukocytes appear to increase with the course of the disease and an early lymphocytosis later gives way to a polymorphonuclear leukocytosis. Bunting has recently stated that a relative or absolute increase in the transitional cells and a total increase of the blood-platelets is a constant distinguishing feature of the disease.

On January 6, 1925, the patient stated that one week ago the left lower leg began to swell, the swelling gradually involving the entire leg, lower abdominal wall, and genitalia. After an x-ray treatment of the abdominal glands, this edema subsided and to date there has been no recurrence. This complication was undoubtedly due to pressure from enlarged retroperitoneal glands on the veins from the affected parts, and as soon as this pressure was relieved by the shrinking of the glands the swelling disappeared. Had it not been for the localization of the edema, it might have been thought to be of renal origin, as the urine at this time was observed to contain a heavy cloud of albumen, and hyaline and granular casts.

The blood-count (200 cells) at this time showed: Polynuclears, 46 per cent.; small lymphocytes, 5 per cent.; large lymphocytes, 14 per cent.; large mononuclears, 6 per cent.; transitionals, 5 per cent.; eosinophils, 16 per cent.; basophils, 1 per cent.; red blood-cells, 4,100,000; white blood-cells, 8,600; hemoglobin, 78 per cent.; blood-platelets, 448,000.

January 13, 1925: Urinalysis showed a faint trace of albumin and a few hyaline and granular casts.

January 30, 1926: Blood-count showed red blood-cells, 3,940,000; white blood-cells, 6,050; hemoglobin, 62 per cent.; polynuclears, 84 per cent.; large lymphocytes, 5 per cent.; large mononuclears, 5 per cent.; transitionals, 4 per cent.; eosinophils, 2 per cent.

On April 3, 1926, the patient complained of some distress in the epigastrium after meals. He reported increasing weakness and constant drowsiness. The glands were all smaller, and with this reduction in the size of the glands there had occurred an amelioration of the pruritus and of the excessive heated feeling of the entire body, from which he had previously suffered. This sense of heat was now confined to the hands and feet. Recently there had been some brownish pigmentation on the anterior surface of the left thigh. The heart action was very rapid, the pulse 128, and the temperature 102° F. The weight was 137 pounds. The patient had been complaining for several weeks of severe chills almost daily, especially when hungry or exhausted.

The criteria essential in making a diagnosis, which were established in this case, are as follows:

1. A primary enlargement of the retroperitoneal glands, followed by progressive painless enlargement of the posterior and anterior cervical, axillary, and inguinal glands. The glands were not tender. Individual nodes could be isolated and were freely movable. None of the glands was adherent to the skin, and none showed any evidence of breaking down. They varied from time to time in size and consistency.
2. Enlargement of the liver.
3. Progressive loss of weight and strength accompanied with fever that, in this case, was irregular in type.
4. The presence of secondary anemia with a polymorphonuclear leukocytosis, and an increase of the eosinophils and blood-platelets.
5. Pruritus.
6. Biopsy of glands, which revealed characteristic findings of Hodgkin's disease.

The literature seems to indicate that the case can have but one outcome. The only treatment that has proved of any value in Hodgkin's disease is roentgenotherapy, the success of which is usually most noticeable in the early cases, especially those in which the glands have not yet become fibrous. Some observers are convinced that the disease is curable in the early stages. Yates,[5] for instance, advises radical extirpation of all the tissue that can safely be taken from the affected region, followed by postoperative radiation of the site from which the tissue has been removed, preference being given to the x-rays. The radiation, however, should be carefully controlled by blood-counts in order to avoid a leukopenia. Successive radiations or excisions are carried out as indicated by the blood-picture and evidences of recrudescence. Symmers,[2] on the other hand, states that although roentgenotherapy is often followed by a remarkable diminution in the size of the lymph-nodes, the outlook

is hopeless. While it is true that life may be prolonged and distressing pressure symptoms may be relieved, the consensus of opinion is that no patient has ever been cured of Hodgkin's disease by radiation or by any other method.

On April 17, 1926, patient was admitted to the University Hospital to the service of Dr. Pendergrass. He was rapidly losing weight and strength and was retaining but little nourishment. He was troubled with a persistent cough and slept almost constantly. He developed a bronchopneumonia and died May 15, 1926, having been under observation continuously for over twenty months.

An autopsy was performed by Dr. McCutcheon of the University of Pennsylvania. Following is the report of the autopsy as submitted by Dr. McCutcheon and Dr. Baldwin Lucke. The fibrosis noted in the lymph-glands was probably partially induced by Roentgen-ray therapy.

Autopsy No. 11776-'26-468. Date, 5-15-1926, University Hospital.
Services of Drs. Boles and Pendergrass. *Performed* by Dr. McCutcheon.
Name of Subject: B. M.
Admitted to Hospital: 4-27-1926.
Died: 5-15-1926.
Clinical Diagnosis: Hodgkin's disease.
Bacteriologic Diagnosis: No bacteriologic examination.

Gross Anatomic Diagnosis

Hodgkin's disease.
Heart: Normal.
Spleen: Chronic hyperplasia and fibrosis.
Liver: Hodgkin's disease.
Kidneys: Normal.
Pancreas:
Skin:
Lymph-nodes: Right and left axillary. Peribronchial. Retroperitoneal.
Lung: Bronchopneumonia. Tuberculosis, cavity formation, right apex.

Histologic Diagnosis

Fibrosis: Hyaline degeneration of the arteries.
Hodgkin's disease.
Slight cloudy swelling.
Normal.
Superficial erosion.
Hodgkin's disease (fibrosing stage).
Faulty resolution and partial organization.

REPORT BY DR. M'CUTCHEON

External Examination.—Body of white, adult male, normal framework and moderately emaciated. Body is still warm. No edema, jaundice, or eruption. Scar of old laparotomy wound to the left of the umbilicus. Scleræ clear; no discharge from orifices. Genitalia and extremities negative. Hair distribution and skull normal.

Internal Examination.—Pericardial sac is normal. Pleural cavities free from adhesions.

Aorta.—Normal in caliber; no marked sclerotic changes.

Heart.—Weighs 250 gm.; normal in consistency. Epicardium smooth; myocardium normal in color. No changes in valves. Wall of left ventricle, 15; right, 5 mm. Aortic valve, 7; mitral, 9; tricuspid, 11; and pulmonary, 6 mm. No marked coronary sclerosis.

Abdomen.—Shows adhesions of omentum below the laparotomy scar. Peritoneum is smooth and glistening. Cavity contains about 50 c.c. of clear fluid. Diaphragm reaches to the fourth rib on the right side; fourth interspace on the left. Appendix free. Organs in normal position, except as described.

Spleen.—Weighs 220 gm.; tough. Capsule unthickened. On section pink, and fibrosed. Follicles not distinct.

Esophagus.—Grossly normal.

Stomach.—Moderate size, grossly normal. Gastric glands moderately enlarged along lesser curvature.

Intestines.—Are grossly normal. No lymphoid enlargement of mucosa.

Liver.—Weighs 2,295 gm.; consistency increased slightly. Capsule unthickened on superior aspect of right lobe; on lower aspect of left are pale areas of new growth. On section some of these are quadrangular, some circular; these rather sharply demarcated and not encapsulated. Gross structure of liver tissue can be followed for some distance into these areas and in this respect they do not resemble tumors; largest of these areas about 4 cm. in diameter. Many other smaller, more infiltrating areas of new growth, are found, especially in the right lobe, otherwise the liver tissue presents the usual appearance in regard to color and markings.

Gall-Bladder.—Is grossly normal. Bile is readily expressed into duodenum.

Pancreas.—Consistency increased; lobulation normal. Neighboring lymph-nodes are somewhat enlarged, scarred, and do not encroach on pancreas. Mediastinal and peribronchial lymph-nodes are not enlarged.

Adrenals.—Grossly normal. The left embedded in a mass of scarred lymph-nodes.

Left Kidney.—Weighs 175 gm.; right, 130 gm. Capsule strips easily, leaving a smooth surface. On section normal color; cortical striations somewhat less distinct than normal. Corticomedullary junction distinct.

Left ureter is embedded in scar tissue as it crosses the iliac artery, but no hydronephrosis is present.

Urinary Bladder.—Is grossly normal.

Prostate.—Slightly enlarged. The mesenteric lymph-nodes show little change. Lymph-nodes

along the aorta are intensely scarred, pale pink, and embedded in a mass of dense white scar tissue; the same is true of nodes along the left iliac artery. Axillary nodes are normal in size and indurated. Inguinals and cervicals not palpable.

Sections from the lung, peribronchial lymph-node, right and left axillary lymph-nodes; retroperitoneal lymph-nodes; spleen; liver, and kidney.

Sections were prepared and examined histologically from the following parts: (1) Lung, (2) liver, (3) spleen, (4) kidney, (5) pancreas, (6) skin, (7) lymph-nodes.

Lung.—The pleura is moderately thickened, fibrosed, and covered with a layer of low cuboidal mesothelial cells. The architecture of the lung is considerably distorted. In most areas the air spaces are either collapsed or else filled with hyalinized fibrin exudate in which lie occasional leukocytes and young connective-tissue cells. The alveolar walls are somewhat thickened and many are adherent to one another. Many of the capillaries are completely collapsed; others, however, are considerably engorged. Several large bronchi are packed with pus cells; their mucosa is partly lost and they usually have edematous walls infiltrated with leukocytes. In a few areas the lung tissue approaches the normal, but here the air spaces are flooded with erythrocytes and many contain phagocytic cells laden with carbon pigment. The arteries have a somewhat irregularly thickened and partly hyalinized intima; the internal elastica is split and much proliferated.

Liver.—In many areas there are masses of peculiar granulation tissue, consisting of densely interwoven delicate fibrous strands in which lie great numbers of large multinucleated giant-cells (Dorothy Reed cells); the nuclei of these cells take a deep purple stain. Here and there are scattered a few eosinophils, but they are nowhere conspicuous. Many of the fibrocellular masses occupy several low-power microscopic fields. Elsewhere in the liver smaller areas of like composition are encountered, occurring particularly at the lobular peripheries. The liver tissue proper is not separated from the new growth and in many places tongues of liver tissue extend into the granuloma. The hepatic cells have the usual arrangement, but they are generally swollen, poorly outlined, and many have lost their nuclei.

Spleen.—The capsule is moderately thickened, its outer portions are very edematous and infiltrated with small round cells, eosinophils, plasma-cells, and larger endothelial elements. Trabeculæ are of average size. The splenic structure is preserved, but there is an evident overgrowth of the stroma and the walls of the blood-channels are distinctly prominent. The sinuses contain, chiefly, erythrocytes, with occasional intermingled larger mononuclear elements; they are lined by prominent endothelial cells. The splenic pulp is scanty, and in addition to the usual cellular elements there are seen occasional large multinucleated giant-cells. The central arteries have thick hyaline intimal coats. The Malpighian follicles are small, densely packed, and in many are seen small irregular hyaline masses. No granulomas, such as occur in the liver, are encountered.

Kidney.—Capsule is normal. The stroma shows no proliferative changes. The general architecture is normal. The capillaries, in both cortex and medulla, are inconspicuous. Glomeruli are of average size, normally nuclear, and have poorly filled coils; the capsule of Bowman and its lining cells are normal. The convoluted tubules are lined by moderately swollen poorly preserved cells which are frequently devoid of nucleus; many of the cells contain small vacuoles. Similar changes are seen in the limbs of Henle. The collecting tubules are normal. A few larger branches of the renal arteries have a slightly irregularly thickened intima.

Pancreas.—The stroma is normal. The lobules are of average size. Acini are normal. Islands of Langhans are numerous and consist of well preserved, normally appearing cells.

Skin.—The epiderm is normal. The corium is slightly edematous, and free from cellular invasion. A number of sweat glands are normal. At one area there is a superficial erosion; here the epiderm is absent, its place being taken by a hyaline necrotic mass in which are embedded a number of dark pyknotic nuclei. Processes of newly-formed regenerating epiderm are seen to extend into and beneath the scab.

Lymph-nodes.—Sections are taken from the right axillary, left axillary, peribronchial, and retroperitoneal lymph-nodes. The changes are

similar, but most marked in the axillary nodes, which have a thickened, fibrous capsule. The interior of the node shows much disorganization. Many vessels are surrounded by extremely thick hyaline mantles, and in addition there are many places of roundish hyaline bodies having no discoverable relation to the vascular supply. The sinusoids contain eosinophils, as well as large proliferated reticular cells. The stroma is prominent. The lymphoid tissue has been partly replaced by epitheloid cells, as well as by hyalinized fibrous scars.

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POSTNATAL CARE*

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The birth of the baby does not mark the termination of an obstetrical case. It may be the very start of disease. Because of the joy connected with every new arrival we too often have a tendency to regard our task as done with nothing more needed except a little time to bring the patient back to full activity. The relaxation which follows the effort required for delivery is also apt to make us forget that the patient needs continued care.

The profession has practiced prenatal care only during the last twenty years and even now it is not given to any extent in the majority of obstetrical cases. The majority of obstetrical cases are not hospitalized and a large percentage of such cases are not treated with any surgical technic. Added to these conditions is the tendency to regard delivery as the termination of the case and giving only occasional visits to the patient during the puerperium. As a result we have had a stationary mortality rate in obstetrics in this country for over twenty-five years. This does not compare very favorably with the mortality rate of any of the well known diseases. This mortality rate and the corresponding morbidity will probably continue until the profession and the laity have been taught, *first,* to give thorough prenatal care, *second,* to regard delivery strictly as a surgical procedure where special knowledge and skill are required, and *third,* that delivery is to be followed by close observation and care over a period of from eight to twelve weeks.

Prenatal care was taken up rather rapidly by the profession. It is practiced in every well regulated maternity today. The results have been very satisfactory. The absence of eclampsia alone is proof enough of its value. The postnatal period, however, has been somewhat neglected. That period of three months following delivery really furnishes as much opportunity for supervision and help as the prenatal period and it is quite essential that we give our patients more careful supervision during that time.

An attempt is here made to discuss some of the ways in which that supervision can be given.

The five most essential things to be guarded against during the first few days following delivery are: bleeding, toxemia, retention of urine, restlessness and infection. Since the introduction of pituitrin and ergot, especially in hypodermic form, and the use of gas as an anesthetic instead of ether, we have much less postpartum bleeding. A cubic centimeter of pituitrin can be given hypodermically at the end of the second stage and an ampule of ergot intramuscularly at the termination of the third stage. If bleeding occurs after the patient is in bed either ergot by mouth or a repeated injection of pituitrin will generally check it. A woman with a tendency to bleed is very rare and such a tendency is usually noticed during delivery and the uterus is packed. Bleeding some days after delivery generally means retained placenta or membranes, a condition which generally corrects itself, but should be treated by curettage before the patient has been harmed by an excessive loss of blood. Some women develop severe anemia at the time of delivery regardless of the amount of blood lost. Rare cases of even fatal hemolysis have been recorded. A blood test should be made if the patient has lost considerable blood or has pallor. Many of the headaches which are rather frequent during convalescence are due to anemia. Diet, fluids, and the use of some iron tonic should be continued until a blood count indicates sufficient improvement. This may mean for a period of weeks.

Twenty to thirty per cent. of all cases of

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eclampsia in this country occur postpartum according to Williams, Newell, and McPherson. Postpartum eclampsia is regarded by some as the most severe type and by others in just the opposite manner. It would be safe to say, however, that it has a mortality in the very best of hands of from ten to twenty-five per cent. Every patient having a blood pressure over 140 during or before labor or marked edema or albumin in the urine should have frequent blood pressure readings after delivery and catheterized specimens of urine examined at least every twenty-four hours. If the blood pressure is high or any pre-eclamptic symptoms are present such as visual disturbance, epigastric pain, headache, edema or retention of urine, the patient should be given a *non-protein* diet, an abundance of fluids and a brisk saline cathartic. If she is at all restless or in need of sleep she should be given a fairly large dose of morphin hypodermically or a small retention enema containing chloral hydrate and sodium bromide, of each 30 grains. If fluids are urgently needed they should be supplied by vein or under the skin. If the blood pressure becomes alarming such as 180 to 200 for any length of time, venesection will generally give some relief. When the symptoms subside she should be placed on a *low protein* diet. Saline cathartics should be continued for some days. She should have a longer period of rest in bed than is usually required. In many toxic cases the vision is disturbed and these cases should be seen by an oculist. I have seen a case of eclampsia develop on the sixth postpartum day with hemiplegia during the first convulsion and death ten days later.

Every parturient woman needs sleep. If there is no tendency to bleed following delivery it is many times desirable to give 1/6 grain of morphin by hypodermic when the patient reaches her bed. This is especially indicated if delivery occurs at night. Her periods of rest should be as long as possible and for that reason we have at the Evanston Hospital discontinued the 2 A. M. nursing on every case during the first week and during the second week also if the baby is over seven pounds or is gaining satisfactorily without it. There is a tendency in many maternity wards to establish a routine convenient to the nurses and to forget the necessity of long periods for sleep or rest for the patient. The patient should not be disturbed for unnecessary things in the early morning such as taking her temperature and washing her hands and face. Some simple hypnotic can be used with very good results at times if the patient does not sleep well. Pain such as that produced by uterine contractions or engorged breasts should always be relieved is possible, especially at night.

If the patient does not void within twelve hours after delivery she should be catheterized. After the first twelve hours her bladder should be emptied at least every eight hours. If a patient has been catheterized she should have a test catheterization after she voids at least once a day until the residual urine has been found to be less than 50 c.c. on two consecutive tests. Each catheterization should be followed by the instillation of 20 c.c. of some urinary antiseptic such as one-half per cent. mercurochrome solution. The bladder should never be allowed to distend regardless of the time between voidings or catheterizations. It may fill very rapidly becoming distended in only a few hours. A full bladder pushes the uterus out of the cone shaped pelvis and may thereby cause postpartum hemorrhage. It may also become so distended that the musculature will not function for days. Once a patient has been catheterized the bladder must be completely emptied at least once or twice daily in order to prevent a cystitis from residual urine.

The majority of all fevers during the puerperium are due to infection of the pelvis and external genitalia and practically every infection of this type is due to the lack of strict aseptic technique during the delivery and the puerperium. A great many cases of puerperal fever have their origin after delivery and they should all be prevented. It is fairly accurately estimated that eight thousand women die in the United States every year from puerperal fever, one for every four hundred deliveries. This estimate is based upon the reports received from the states requiring the registration of all births and deaths. The registered area comprises only 82 per cent. of the population. The reports of our maternity hospitals furnish the evidence to show that they are practically all due to contamination. One reported series from different maternity centers totaled 39,000 deliveries with only five deaths due to infection, or one in 7,800 instead of one in 400. If puerperal infections

were auto infections the figure would be much higher. We also have the report of 11,165 home deliveries in the slums of large cities with only one death due to infection. These deliveries were all followed closely by visiting nurses during the puerperium. This would seem to indicate that careful technique with the patient at home yields the best results from the standpoint of infection. However, we have the figure of 8,000 deaths every year due to infection and the statement that most of our babies are born at home. The two put together give evidence of lack of proper asepsis during the delivery and the puerperium among our home cases.

No attempt can be made to cover the subject of puerperal fever but some of the very first principles of preventive technic can be mentioned. The cases most apt to be contaminated are the ones being treated in general hospitals or by general practitioners. In visiting patients the obstetrical cases should be seen first and the first ones to be seen should be those free from temperature. Any patient having a temperature of 100.4 degrees longer than 48 hours or giving other evidence of infection should be isolated if in a hospital and one should be careful about properly cleansing one's hands after visiting such a patient. No one should come in contact with an obstetrical patient if he himself has an infection such as an infection of the upper respiratory tract, cough, boils or any surface infection. Any infection on any part of the patient's body should also be carefully treated and she should be taught the necessity of proper care. The external genitalia should be carefully sponged and showered with some mild germicidal solution after each urination or evacuation of the bowel and the patient should be taught to do the same. After geting about she should continue this as long as any amount of vaginal discharge exists. She should not take tub baths until after four weeks using a shower from the second week on or sitting over the water on a stool in the tub. She should not be given any vaginal douches. Nothing should enter the vagina until six weeks have elapsed and then only in the absence of vaginal discharge.

Every case of puerperal infection should have her own nurse. The general policy of treatment is non-interference. She should be in the Fowler position. An ice bag can be kept on the lower abdomen. Ergot may be given several times a day. The perineal stitches if badly infected should be removed to increase drainage. The uterus should never be invaded even though there is retained membrane or placenta in the uterine cavity except in cases of dangerous hemorrhage. Vaginal examinations should be avoided. If the case becomes chronic and the infection localizes operation or drainage is occasionally indicated. Everything possible should be done to increase the general health of the patient through sleep, the relief of pain and an abundance of food and fresh air.

Chronic pelvic cellulitis is the most common type of infection which we see. The patient may never have fever or may have only low fever a short while. She makes a very slow recovery, has pelvic pain, and may be as long as months or even years before feeling strong and vigorous. The treatment is the same as that for the more severe types of infection. Strict asepsis will prevent the majority of these cases.

There are two other very common sources of fever:—one, infection of the breast, the other, infection of the kidney. Breast infections are most likely to occur after the second week but may occur at any time. The most common type is a general mastitis with chill and a high fever which is generally of short duration. The other type where the infection localizes may originate with a general mastitis. A great many infections of the breast are hemogenic, possibly from bacteria entering the blood stream through the birth canal. However, the mother should be taught to use an exaggerated degree of cleanliness about her nipples, keeping them covered with sterile gauze and avoiding touching them with her fingers, also allowing the baby to nurse only twenty minutes to avoid trauma and cleansing them before and after each nursing. If pain, redness, lumps and temperature develop she should tighten the breast binder, limit her liquids, apply either heat or ice, discontinue nursing the affected side for at least twelve hours and be in bed in order to avoid moving the breast. The majority of the cases of generalized mastitis are of short duration but are rather severe in effect while they last. Nursing may be resumed in most cases after twelve or twenty-four hours regardless of the temperature or other conditions and the breast is then watched for the development of pus. It is generally at least forty-eight hours before an abscess develops depending somewhat on the

depth of the infection and the size of the breast. During such time the patient should be kept quiet and almost continuous heat applied. Thorough and extensive drainage is indicated. Best results at drainage are obtained where general anesthesia is used in order that thorough exploration can be made.

Pyelitis during the first two weeks is not rare. Here, too, the cause is probably bacteria in the blood stream and their origin may be the birth canal. The principal contributing cause is lack of drainage probably due to pressure on the ureter at the pelvic brim by the heavy uterus or kinking of the ureter following the emptying of the large pregnant uterus. A parturient woman in the early weeks with no pelvic findings or breast symptoms and running a hectic temperature with chills and some tenderness over either kidney should be catheterized and the specimen examined for pus.

Forced fluids, posture and a urinary antiseptic should be tried for two or three days if the symptoms are not severe. Large doses of urotropin and sodium acid phosphate seem to give better results than the alkalies during the first few days of the attack. If the findings are alarming, however, or if moderately severe cases do not yield within three days, a ureteral catheter should be inserted and allowed to remain from 12 to 24 hours. The kidney should then be catheterized and drained about every 48 hours until a sterile specimen of urine is obtained.

The most important process which takes place in the parturient woman is the involution of the uterus. It normally occupies from 8 to 12 weeks. The principal part of the involution takes place during the first 6 days. It is of shorter duration in women who nurse their babies. In fact, there is such a condition as lactation atrophy of the uterus due to continued stimulation which takes place during nursing. The condition of subinvolution is a rather common one and may be a very important factor in delaying the recovery of the woman. It may even for months have an influence on her general health. The four things which most disturb the involution of the uterus are: *first,* infection, *second,* activity, *third,* retroversion, and *fourth,* lack of nursing. Infection we have already discussed. The uterus situated as it is, can easily be disturbed by the patient being in the upright position. It is indicated, therefore, that she remain in bed most of the time during the first three weeks. During that time she should have some one to care for her baby during the day and night. After that period of time her activity should be increased very gradually and she should not be doing everything she was accustomed to do until at least eight weeks have gone by. Many menstrual troubles and some of the disorders of the menopause are due to the fibrosis which results from disturbing the involuting uterus. She should sit up some from the third day on and lie on her abdomen each day for at least an hour as both these positions promote drainage and help to keep the uterus forward. Some obstetricians have their patients assume the knee chest position for a short time each day from the third day on.

Retroversion occurs in about 20 per cent. of all parturient women. Dr. W. C. Danforth and the writer in reviewing 1,000 cases of pregnancy found that it occurred 188 times in 1,000. It was found in 59 cases on the twelfth day postpartum, a fact which speaks very favorably for a careful vaginal examination under aseptic conditions at that time. A uterus which has been retroverted before pregnancy will almost invariably retrovert during its involution. The influence which retroversion has on involution is probably due to the passive congestion which it causes. The involuting uterus is quite apt to retrovert due to its weight and the relaxed condition of all of its supports. If a patient has been known to have a retroversion before pregnancy or if such a tendency is discovered at the examination on the twelfth day she should be instructed to take the knee chest position at least twice daily for ten minutes and to spend considerable time on her abdomen. We were able to demonstrate correction of the position in 24 out of 59 such cases, or 40 per cent.

Every patient should have a careful pelvic examination about the time when involution would be complete. This should always include examination of the cervix with the use of the vaginal speculum. If a tendency to retroversion exists she should be examined at the sixth week postpartum, otherwise the eighth week is the most suitable time. If the uterus is found to be retroverted it should be replaced and a pessary inserted to remain for a period of two months. She should return in one week to make sure that the pessary is doing its work and again at the end

of the first month to have it cleaned. Correcting a retroversion will generally promote involution.

If the patient has symptoms of subinvolution such as prolonged or irregular bleeding, extreme weakness and backache she should be instructed to take more rest and ergotin may be prescribed several times a day in 2 grain doses. No local treatments should be given until after the sixth week. Generally tampons of very thick glycerite of boroglycerin every day or every other day repeated six or eight times will dehydrate the boggy uterus and give relief. This same treatment may also help to relieve some of the tenderness in the vagina if present and thereby help to prevent the development of a dyspareunia. Hot long douches should be used at the same time.

The cervix many times shows erosion and ectropion at eight weeks. Those patients should be asked to return in a few weeks and if the condition still exists the cervix should be cauterized with a fine electric cautery making several deep radial cauterizations in each lip. They should return about every seven to ten days to have the vagina and cervical os cleaned out and 2 per cent. mercurochrome solution applied to the healing area. The effect of douches following the use of the cautery is questionable but better results seem to be obtained where 5 per cent. soda solution has been used as a douche once or twice daily during the month following cauterization. Sex trauma should be avoided for two or three weeks. Cauterization is generally followed by copious vaginal discharge and sometimes a little spotting of blood. The full effect is not obtained until after one to three months have elapsed. Occasionally a second cauterization is necessary.

Following delivery the bowel is apt to be very sluggish. An enema every 48 hours until the patient is up and about seems to take care of this condition very well. Enemas should not be given at more frequent intervals unless there is distress or some very good reason. There is no good reason why the patient should be given an obnoxious dose of castor oil on the second or third day. Mineral oil and diet will as a rule enable the patient to discontinue the use of enemas after two or three weeks. She should be cautioned against their continued use.

The mental condition of the patient should be carefully watched. The pediatricians have established a rather complicated routine for the care of babies and many times this routine becomes quite a burden to the patient especially if she has not been well prepared for it. Many women permit the complicated routine care of the baby to occupy too much of their attention. They are unable to look at their task from a broad view point and find themselves paying attention to various parts of the aseptic technic in connection with the baby to such an extent that they neglect themselves. This is especially true of first pregnancies. It seems to be a general tendency at present for women to attempt to do everything that we are accustomed to find men doing instead of training themselves for the tasks which they were originally intended to do.

In the last two weeks I have seen two cases of nervous exhaustion in women whose babies were from two to three weeks old due almost entirely to the fact that their tasks to them seemed absolutely unconquerable. Many of our women have become accustomed to doing other things rather than attending to the problems of the home and therefore the confinement which a new born baby necessitates causes them to become actually ill. This same mental attitude also many times causes an inability to supply the necessary nourishment which the infant should have. We should therefore not only pay attention to their physical welfare but we should also help them to provide the necessary help at home in the way of practical and trained nurses, and we should make it a point to give them sufficient instruction to enable them to maintain their own self confidence.

The majority of all cases of puerperal psychosis occur in women with some mental weakness. A history of some insanity or mental weakness in the family can be obtained in most cases. Pregnancy causes a strain on the individual allowing this mental defect to appear. We should not disregard complaints of mental distress. Women with any history of insanity in the family should be especially watched. Such cases of insanity should be placed in the hands of a neurologist. The baby should be weaned.

The nursing mother needs to pay very little attention to the articles in her diet. Except in very rare cases she can eat the things she likes or has been accustomed to. She should not force herself to eat an extra large amount of food.

It will not have the desired effect, that of increasing the milk. It will only tend to put fat on her own body. She should drink a fairly copious amount of fluids. Thoroughly emptying the breast each nursing will stimulate the breasts more than anything else.

Two general diseases which are very prone to occur within the first few months following delivery are tuberculosis and thyroid toxemia. If a woman has given a history of tuberculosis or comes from a tuberculous family or if she has had any signs of chronic bronchitis with temperature during pregnancy, she should have an abundance of food, outdoor air and rest, during at least three months following the birth of the baby. The most important of these is rest in bed.

Carl Henry Davis has shown that cases having some tendency to thyroid disturbance during pregnancy are prone to develop a toxic thyroid gland during the first six months following delivery. These cases should be watched carefully. They should be asked to return to the office at regular intervals during that period of time.

The general muscular development of the patient can be greatly improved by systematic exercise and these exercises can be started in a mild form during the fourth week, by having the patient take her exercise lying on her back on the floor. The patient should be taught that corsets following delivery are only a temporary measure and that if she will gradually increase her exercises and use her abdominal muscles her abdomen will soon return to its normal condition. The importance of these exercises being taken systematically should be emphasized.

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FUNDAMENTALS IN THE FEEDING OF UNDERWEIGHT CHILDREN*

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Not many years ago the problem of nutrition rested on the daily consumption of protein, fat and carbohydrate in such amounts that the twenty-four hour ration would total a requisite number of calories. It was known that more calories were required if much physical work was done, also that water and inorganic substances were necessary, and that children have relatively higher caloric requirements than do adults. Since then, the nutrition laboratory discovered that not all food-stuffs in a certain class have equal value, that some proteins are inferior to others, that their value for growth and tissue building varies with the animo-acid content. More recently, the importance of the accessory food substances, vitamins, Fat Soluble A, Water Soluble B, Water Soluble C, and Fat Soluble D (antirachitic vitimine) was discovered. A well balanced diet should contain these and about four times as much carbohydrate as protein or fat, and about equal amounts of protein and fat. Children's diets must contain proportionately more protein than adults', for the building-stones, animo-acids, are most essential for the growing organism. Meat and milk contain abundant animo-acids which enter into synthesis of the protein of body cells. In estimating the value of any diet one must remember these facts, also, that its utilization by the body is never complete, but varies with the food-stuff, the digestion and assimilation powers of the individual.

The importance of a properly adjusted diet, ample rest and restricted daily routine are seldom sufficiently emphasized in the treatment and cure of a number of otherwise chronic or progressive ailments. These valuable therapeutic measures have long been employed, however, in the treatment of tuberculosis. Czerny of Berlin has such confidence in his five meal, high fat and protein diet in the treatment of tuberculous children, that he once made the claim that no tuberculous child in his clinic had ever developed miliary tuberculosis. Pirquet in his recent book on diet, says: "All the cures which, in the course of time, have been advised for tuberculosis, culminate in the therapy of feeding. Patients sent to the seashore, mountains, desert, or warm valley, all have in common good food and rest. . . . Children must remain at table until all food is eaten. . . . The increase in weight of malnourished children on a five meal diet is usually very great in the first month, and after that lessens slowly." He concludes this chapter by saying: "The results have been so satisfactory that all other methods of treatment have been omitted."

The alarming incidence of physical unfitness among our young men during the draft, the simultaneous "discovery" of the "neglected" preschool child, and the valuable contributions on

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vitamins and diets from the experimental laboratories of nutrition led the pediatrician, school physician and health worker, about a decade ago, to focus their attentions on underweight children. Nutrition clinics, "malnutrition" classes and school lunch-clubs soon had their inception, and have done excellent, pioneer work in the improvement of the nutritional state of many underweight children. Excellent treatises by Emerson of Boston, Charles Hendee Smith of New York and Kaiser of Rochester (New York) show what can be accomplished with large groups of underweight school children. The technique evolved by the clinicians Emerson and Smith was followed by Kaiser, who, now, questions the permanency of the results obtained.

In the latest edition of "Newer Knowledge of Nutrition" McCollum says: "The system of diet which can be confidently recommended with assurance that it will go a long way toward improving the physical fitness of the nation is a very simple one. . . . It includes the best elements from those several systems of diet which have been thoroughly tested in human experience, and have been found successful." He recommends that every daily ration should include a quart of milk, some leafy vegetable and some raw fruit or vegetable. The remainder of the food-supply may safely be derived from any of our ordinary cereals, tubers, sugar and meats. To this should be added for children, cod liver oil and outdoor exercise in the sunshine. He reiterates, that we should not be content to speak about a "normal" diet, but should recommend "optional" diets. This is especially true when we deal with underweight children. An extensive investigation, conducted in a large institution for colored children found most of them malnourished, and that they were being fed a diet which was deficient in quality, and in quantity. His conclusions are: "improvement of the dietary is of the greatest significance for the welfare of a large percentage of American children of the present generation. His experiments prove that butterfat and egg-yolk fat contain the unique dietary property which greatly promotes growth. Also, that milk and leaves of plants in a diet correct the defects of cereals, tubers, roots and meats. The discovery of these "protective foods" about 1915 opened a new era in nutrition. Terman, a year before, came to the conclusion that one out of every ten school children was suffering from a grave form of malnutrition. Despite the increasing application of this new knowledge of nutrition during the following years, Leete's summary in 1921 shows that 15 to 25% of American school children are still suffering from malnutrition.

Cross in 1923 states that: "Investigation has shown that 96 per cent of the children coming to this country from the southern part of Europe have sound teeth, while it is well known that the teeth of 96 per cent of American children are defective. The trouble lies in great measure in faulty nutrition during prenatal life, infancy and childhood. A satisfactory diet is essential for the development of a sound set of teeth." Investigators have repeatedly pointed out that we derive a relatively larger part of our diet from refined cereal products, sugars, muscle meat and potatoes, a combination of foods which does not support satisfactory development, longevity, and fertility in animals studied experimentally.

Improvement of the nutritional state of underweight children is one of the most important tasks of the practicing physician, not because parents realize that something should be done if a child is appreciably underweight, but because it not infrequently is the physician's most potent weapon in the prevention and treatment of a number of otherwise chronic ailments. Underweight children with disease of the heart, blood, urinary system or gastro-intestinal tract, including acidosis and diabetes should not be treated by these methods, as they usually require special diets and therapeutic measures. On the other hand, malnourished children with tuberculosis of the lymph glands, pleura, bones and joints; children with insufficient or improper food or rest; anorexia, the result of improper environment; goiter, without increased metabolic rate, secondary anemia and tardy rickets, yield the best clinical results. In fact, frequently, the weight increase and improvement of the pathological condition are coincident.

During the past five years we have used a vitamin-rich, 5 meal diet in several hundred children with the above enumerated ailments. If the regimen is consistently followed for several months, the results are usually so striking that the diet and rest must be given the credit for the improvement. In contrast to other established methods, it might be called an individual, intensive method, for each child is started on the

diet as soon as a diagnosis is made. With the aid of a special note book, containing a list of 100 calorie portions, the mother or nurse can readily compute the daily food intake. A two-day record each week aids in determining the quality and quantity of food eaten. If there is no progress, or if the underlying condition warrants it, the patient should be seen oftener than once a month. Children not confined to bed should indulge in the proper kind of exercise and play. Most of these children should be up less than ten hours a day. The rules we attempt to enforce are as follows:

1. The cooperation of the patient, with the parent and the physician is important.
2. The quantities of food should be governed by the age, digestive capacity and appetite of the child.
3. The child must consume enough of proper food each day to insure a consistent gain in weight.
4. No food should be served ice-cold.
5. Milk may be flavored with sugar, malted milk, cocoa or vanilla.
6. Ample rest (breakfast and supper in bed), fresh air (window open at night), sunshine (sunbaths before the noon meal on warm days) stimulate the appetite, digestion and assimilation.
7. No food and very little water should be given between meals.

Smith's figures on 110 children in the nutritional class at Belleview Hospital showed that 57 per cent gained on a 3 meal diet 1.7 times the average rate for their ages. The tuberculin test was positive in 54 per cent of his cases. His best case showed a gain of 12½ lbs. in six months. Most of his patients came from New York City's tenements, but he had the aid of trained nutritional workers in the homes, and such incentives as photographs before and after, prizes and rewards helped to keep up the interest of parents and children. The average gain in our last thirty children, suffering with the above enumerated ailments was over eleven pounds for the three month period of intensive feeding—about 5 times the average rate of gain. Fifty per cent of our patients had a positive tuberculin reaction. Our best case showed a gain of 19 pounds in three months. These results were due to the fact that in the evolution of our technique the principles advocated by Czerny, Pirquet, McCollum, Emerson and Smith were incorporated. To bring a child's weight within normal limits for height and age and to keep it there is not only a prophylactic measure, but a potent therapeutic aid in the treatment and cure of a number of otherwise chronic ailments.

THE VALUE OF UROLOGIC STUDIES IN THE DIAGNOSIS OF ABDOMINAL CONDITIONS

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With the advent of mechanical aids and the advancement in diagnosis both in the chemical and roentgen laboratories, urology has been the last of the important specialties of medicine to be placed on a firm footing and has eventually been accredited by its ability to clarify many puzzling clinical pictures.

Only to mention the new adjuncts to diagnosis at our command—cystoscopy, ureteral catheterization, the shadowgraph catheter, x-ray alone or in conjunction with the latter, urography including pyelography and cystography, blood chemistry and renal functional tests.

Among a group of one hundred cases in the medical or surgical wards of a general hospital, it is safe to say that fully one-third require urologic study to round out the complete diagnosis. Reference is not made, of course, to those outspoken cases which readily and properly group themselves into other special departments of medicine and surgery. For example, fully twenty-five per cent. of patients affected with stone in the right ureter coming to our service at the hospital or in private practice had been previously operated upon for appendicitis, without relief of their symptoms.

Ureteral stricture is much more frequently diagnosed today than formerly and even the "doubting Thomases" in the specialty now accord the condition an important place in urological pathology. Women especially, suffering from ureteric strictures, present themselves finally to the urologist after having undergone repeated faulty diagnosis and not uncommonly one or more operations of either the gastro-intestinal or genital tract. The symptomatology of this condition is so variable that it will bear more detailed description. The pains or discom-

fort complained of may be referred to any anatomical location from the right hypochondrium to dragging pains in the legs. Often no symptoms are referable to the urinary tract whatsoever, and sometimes they may be transient and apparently insignificant. Again the symptoms may be referred to the gastro-intestinal tract and be confused with and perfectly simulate gastric or duodenal ulcer. Another patient may complain of attacks which apparently are pathognomonic of gall-bladder disease. Ofter the symptoms are referable to uterine or adnexal inflammation and relief is sought by gynecologic operation. Not uncommonly the symptoms cannot be classified as likely due to pathology in any one organ or tract and the patient just complains of loss of strength and weight, general lassitude, and malaise, associated with sleeplessness. For example, a young woman, who complained of general abdominal pain, especially low down on both sides and varying in degree from a moderate discomfort to pains of such severity that analgesics of various kinds were required, entered the hospital. She had had a rise of temperature every evening for ten months. There was no loss in weight and the patient looked well. For several months she had not been able to carry on the management of her household. General physical examination revealed nothing of importance except abdominal tenderness low down on both sides. Her history was practically negative except for a Neisserian infection shortly after marriage. Her urine was perfectly clear and there had been no symptoms referable to the urinary tract. Her white blood count was slightly elevated. Urologic study revealed bilateral ureteral strictures with early bilateral hydronephroses. After twice dilating these strictures, the patient was greatly improved and her temperature for the first time in months remained normal.

Stone in the kidney may be symptomless for years and many patients, carriers of renal stones, reach their graves never having had symptoms of this condition. In many other cases the textbook description of the symptomatology of renal stone is wanting. The characteristic colic, with the appearance of macroscopic blood in the urine does not occur. These patients, however, may complain of epigastric pressure, general or local abdominal pains, nausea, vomiting or heartburn, and their condition is diagnosed as either gall-bladder disease, chronic appendicitis, colitis or just a nervous gastric disturbance. There is no doubt that any or all of the above-mentioned pathologic conditions can be found in conjunction, in certain cases, with renal stone, but at the present time the findings in any of these conditions are sufficiently familiar to the painstaking doctor, so that by a process of exclusion a proper diagnosis should be reached. A urologic study in ninety-six to ninety-nine per cent. of cases will solve the question because we can deposit an opaque substance upon a suspected stone in the pelvis of the kidney, even in those rare cases where the stone itself is not dense enough to cast a shadow. Here the great variance in work in the different x-ray laboratories is an important factor.

Certain non-surgical renal conditions are often the underlying cause of symptoms, suggesting inflammatory conditions within the peritoneal cavity. This group may often require the aid of urologic study to clear up the diagnosis and experience has shown that the pathology may just as often be in the gastrointestinal tract causing urinary symptoms as the converse. A case in point: A nurse was referred to us with the diagnosis of kidney stone. She had complained of definite colic and pain along the course of the right ureter, and sought her physician's advice when she noted bright red blood in the urine. The urinalysis done at the hospital simply recorded the specific gravity, a 1+ albumin and the presence of *many* red blood corpuscles and a few whites in the sedimented urine. Flat x-rays of the entire genito-urinary tract were negative for stone or any gross abnormalities. Cystoscopic examination was entirely negative except for very slight edema about the right ureteric orifice. There was no obstruction to the passage of ureteral catheters on either side. She complained of no pain at the time of examination but was tender on deep pressure anteriorly in the appendix region. Urine examined while still in the cystoscopic room showed an occasional red cell but quite a few granular and hyaline casts. Her blood chemistry showed a slight retention of nitrogen end products. The diagnosis of nephritis secondary to appendicitis was suggested and the request made that a complete gastro-intestinal x-ray examination be made. This revealed

a pathologic retrocecal appendix. In line with this it might be mentioned that not uncommonly acute appendicitis may occasionally show blood in the urine by producing a ureteritis by contiguity. The symptoms then may closely simulate ureteral stone. In this type of case I feel that if the diagnosis is not clear between appendicitis and ureteral stone, one should err on the side of considering the lesion of appendicitis and remove that organ rather than to take the chance of a possible rupture of the appendix with its often serious outcome.

Pyonephrosis, pyelitis, pyelonephritis and tumor of the kidney are frequently mistaken for lesions within the abdominal cavity and the correct diagnosis of any of them should be made correctly if not rapidly with our newer facilities. Only last month an old man of seventy was seen who complained of pain in the left hypochondrium. He also felt a mass in that region which apparently had been increasing in size. He was gradually getting weaker and preferred to remain in bed the greater part of the day. The spleen could be readily palpated and extended three fingers breadth below the costal arch. It was distinctly tender to pressure. There were no red cells found in the urine on repeated examination and there were no striking changes in the urine; an occasional cast and a trace of albumin which could be easily accounted for at his age. There was no tenderness in the lumbar region and the kidney as such could not be made out on palpation but one could feel that whatever the tumor mass anteriorly was, carried the impulse of pressure to the lumbar region. Roentgen study of the gastro-intestinal tract revealed incomplete filling of the splenic flexure and the roentgenologist reported tentatively a diagnosis of tumor of the spleen. A barium enema distended the previously noticed defect in the filling of the colon. A pyelogram was made which showed a definite filling defect in the lower major calyx, and a diagnosis of inoperable tumor of the lower pole was made, probably hypernephroma. At operation all structures contiguous to the left kidney were found so adherent one to the other that the kidney could not be outlined even with the hand in the wound. The wound was closed and the old man went home last week where he may possibly carry on for three or four months more. The pyelogram conclusively made the diagnosis in this case.

One could continue almost indefinitely and enumerate cases of obscure abdominal pains which were finally properly interpreted after complete urologic study.

In the field of gynecology does the urologist find pathology which either occasions urinary symptoms or the converse. Recently we examined an unmarried woman of thirty-eight who complained of pain low down on the left side. There had never been any infection and rectal examination by her gyncologist had revealed no palpable pathology in the uterus or the adnexa. Cystoscopically one could make out an extravesical tumor encroaching on the bladder from behind and compromising the left ureter. A catheter passed into this ureter was obstructed about 4 cm. above the orifice. Examination under anesthesia was suggested and a fibroid uterus was determined. There had been no menstrual changes to call attention to this organ.

It may be interesting to note that dermoid tumors containing either bone or teeth have in two instances been diagnosed roentgenologically as ureteric stone.

Congenital anomalies of the kidney, especially horseshoe kidney has frequently been the source of error in abdominal diagnosis. Especially when the kidney was dysopic has much difficulty been encountered in diagnosing the condition which presented itself as a tumor mass, which suddenly with the onset of infection, occasioned symptoms. Urography will if called upon usually clarify the situation.

Lesions of the prostate and seminal vesicles, from a gonorrheal inflammation to carcinoma, may produce symptoms of such severity and divergence that almost any symptom complex may be perfectly simulated. A study made some years ago of seminal vesiculitis, revealed the most surprising results and led me to believe that no other pathologic entity had been the source of so many mistaken and bizarre diagnoses. A rectal examination will usually, if made intelligently, prevent such errors.

The crises of tabes dorsalis may simulate any of the acute abdominal conditions and innumerable mistaken diagnoses and ill-advised operations have been the result. The cystoscopic findings when present in tabes are very characteristic and may appear very early, often before

some of the better known cardinal symptoms. Here again a urologic study can be of great value.

Tuberculosis of the kidney and the bladder are two conditions which if not sought for intelligently may escape notice. They are less likely to be confused with lesions of the gastrointestinal or genital tract than some of the others mentioned, but not uncommonly masquerade under symptoms referable to these systems.

A complete survey of the many pathological conditions met with in our work has not been attempted, nor an attempt to interpret the various signs and symptoms encountered, but I have merely tried to emphasize the value of urologic study in differential diagnosis, as a few characteristic slides will demonstrate. However, all these technical methods of examination will not and should not displace a most careful and precise history-taking and physical examination, which after all are the criteria by which a medical man is best judged.

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DIAGNOSIS AND TREATMENT OF GALL BLADDER DISEASE

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Recent progress in our knowledge of the anatomy and physiology of the gall bladder has greatly broadened our conception of biliary tract disease and its close relationship with other organs. The result has been that we no longer look upon the gall bladder as an isolated field but we must regard it as a part of a system which includes the stomach, duodenum, pancreas, appendix, colon and liver. This broader conception is supported by recent researches dealing with the lymphatic supply of the gall bladder. Studies have shown that there is a rich lymphatic anastomosis between the liver and gall bladder thus providing a direct avenue by which infection from the duodenum, appendix or colon may travel by the portal vein to the liver and then to the gall bladder by this lymphatic tract. There is also a direct lymphatic anastomosis between the gall bladder and the first portion of the duodenum and an indirect lymphatic connection between the gall bladder and cecum. That infection may easily travel along this lymphatic route is easily seen when we remember that the most intense involvement in early disease of the gall bladder is in the subserosa of this organ where the lymphatic supply is the richest. The intimate lymphatic anastomosis between the liver and gall bladder may also serve to maintain a vicious circle in which the liver and gall bladder constantly reinfect one another with the result that the infective process becomes persistent.

Further consideration of this extensive lymphatic anastomosis between the gall bladder and other abdominal viscera helps to explain the frequent association of gall bladder disease with such conditions as peptic ulcer of the stomach or duodenum, chronic appendicitis, pancreatitis and various disturbances of the colon. It focusses our attention to the possibility that simply drainage or mere removal of the gall bladder alone may not be sufficient to clear up all the symptoms if other organs in its lymphatic environment are also involved. Such a conception will help to explain the apparent failure after surgery of the gall bladder. The persistence of symptoms need not be due to a faulty diagnosis or unnecessary removal of the gall bladder; it may be due to secondary involvement of other organs such as the appendix, pancreas, colon or duodenum. It is only by directing attention to these residual foci of involvement and by treating them correctly after cholecystectomy that a complete cure may be hoped for.

Another feature which is of great practical importance is the ease with which an incorrect diagnosis of atypical chronic cholecystitis may be made or the possibility of laying too much stress on the gall bladder as the sole cause of the symptoms. Dyspeptic symptoms with vague tenderness in the right hypochondrium, a positive van den Bergh when it is not considered in relation to other clinical findings, or indefinite roentgenological evidence in the absence of definite clinical manifestations are pitfalls which may result in incorrect diagnosis. We believe that the diagnosis of chronic cholecystitis is rapidly replacing the hackneyed diagnosis of chronic appendicitis as a waste basket of uncertainty and

that many operations are performed for supposedly chronic cholecystitis when the evidence is misleading or incorrectly interpreted. It is needless to add that there is often no relief after operation and that the degree of involvement of the gall bladder may have been too slight to cause the clinical symptoms or that the seat of the trouble was elsewhere than in the gall bladder. The discouraging results after cholecystectomy, *especially when no stones are present* have been reported by E. S. Judd[1] and several other observers and corresponds to our experience. We feel that removal of the gall bladder alone, if no calculi are present, is only a part of the treatment of chronic cholecystitis and that post operative management should be directed to the other viscera previously mentioned if we wish to eradicate the entire pathological condition.

The early diagnosis of disease of the gall bladder and the correct appraisal of the actual distress caused by this organ are matters of considerable difficulty in cases of non-calculous chronic cholecystitis. There is no short cut and we must make use of the history, physical findings and results of laboratory examination. It is easy to make a correct diagnosis of gall stones in the presence of a typical attack of biliary colic and jaundice but great difficulties are encountered when the history consists of vague pain or oppression in the abdomen, belching, heart burn, flatulence and when physical examination reveals indefinite tenderness in the gall bladder region. The situation is more complicated when other viscera are apparently also involved. Symptoms pointing to an abnormal condition in the colon, stomach or appendix may cloud the diagnosis when in reality the manifestations are those of co-existing pathology in these regions.

The earlier clinical evidence of gall bladder disease will depend greatly on whether the septic, mechanical or dyspeptic manifestations dominate the field. The diagnosis can be more easily made if septic phenomena such as fever and leukocytosis are associated with findings in the right upper quadrant of the abdomen. The condition will be still more easily recognized if the mechanical results such as biliary colic or jaundice are present. The greatest difficulty is encountered when dyspeptic symptoms are in the foreground. Such dyspeptic phenomena are often found in stout female patients of middle age who have borne children but our experience has shown that such symptoms often go back to the first pregnancy and that the gall bladder is often involved in younger patients. Diabetes or glycosuria is not an uncommon finding and may be due to an associated involvement of the pancreas as pointed out by F. H. Lahey[2] and by W. H. Barber[3] who found pancreatic changes in 36 per cent. of all patients operated on for gall bladder disease. The dyspepsia is variable even in the same patient and there are usually no definite periods of complete, seasonal relief such as occurs in uncomplicated peptic ulcer. Remissions may occur but they last a very short time. There may be a history that the symptoms began shortly after or during pregnancy or that the distress became worse during that time. Such information is of considerable value. The distress often comes on immediately after meals and is not relieved by food or soda. The diagnosis is aided if the course is punctuated by periods of biliary colic or septic phenomena. Jaundice is a very valuable sign but is not common in chronic cholecystitis. According to J. Forman[4] jaundice was present in 17 per cent. and a similar incidence was found by us to occur in a study of a series of 100 proved cases of gall stones.

A determination of the bilirubin content of the blood serum may be of value to detect incipient jaundice which cannot be seen with the eye. The normal ratio of bilirubin to blood serum is 1 to 400,000 and the normal icterus index is 4 to 6. A very definite increase in either may be good evidence of a mild degree of jaundice but great care must be used in the evaluation of these results as disease of the pancreas as well as gastric or duodenal ulcer may cause a moderate increase in blood serum bilirubin. The presence of urobilinogen in the urine in abnormal amounts is good evidence of liver injury and may be considered in relation to biliary tract disease, but here too, care must be exercised in excluding hepatic disease due to other causes.

Cholecystography is undoubtedly the most important recent advance in the diagnosis of gall bladder disease. It is based on the principle that phenolphthalein preparations are excreted chiefly in the bile and that these substances may be used as vehicles to transport some radio-opaque material such as iodine or bromine. So-

dium tetraiodophenolphthalein is such a combined substance and may be given intravenously or by mouth. Three conditions must be met before this dye is excreted in sufficient concentration into the gall bladder thus making it opaque to the Roentgen rays.

1. The liver function must be good enough to excrete the dye from the blood into the bile.

2. The passages from the liver to the gall bladder must be patent.

3. The concentrating function of the gall bladder must be good enough to abstract sufficient water from the contained bile so that the dye in the gall bladder is very concentrated.

Since normally, if the gall bladder is healthy, all these conditions are fulfilled and the dye reaches bile in the gall bladder and is there concentrated, the gall bladder will cast a shadow on the Roentgen film. The presence of such a shadow of normal contour and appearing after a normal period is evidence that the gall bladder is normal anatomically and physiologically. An absence or distortion of the gall bladder shadow usually signifies some pathology. The value of this method lies in the fact that it furnishes evidence of the *condition of the function* as well as of structure. The results reported from many observers, numbering many thousand cases are very encouraging. Sufficient time has elapsed to establish the procedure on a firm basis. All reports agree that the diagnosis is correct in the vast majority of cases operated on, most observers stating that operation corroborated the findings in 90 per cent.

Sufficient time has not yet elapsed for us to know how early gall bladder disease may be recognized by the aid of cholecystography. Undoubtedly the disease process must be present for some time before the test becomes sufficiently definite, but experience has shown that a great number of cases have been diagnosed by the aid of this procedure when the history and physical examination were too vague and these were unquestionably recognized at a much earlier period than they would have been without the aid of these measures.

The treatment of cholecystitis with or without gall stones is surgical. Medical and dietetic measures may aid in diminishing the severity of the attack but can hardly be considered as a direct means of combating infection of the gall bladder and biliary passages. Infection is the most imortant element in cholecystitis and is probably chiefly responsible for the chronicity and the development of complications, particularly in the liver. The findings of S. H. Mentzer[5] are of interest in this connection. He found that the appendix was involved in 68% of a series of patients operated on for gall bladder disease and that peptic ulcer of the stomach or duodenum was present in 29%. E. A. Graham[6] found involvement of the liver in the vast majority of cases. Cultures from the bile and wall of the gall bladder are also of interest. N. von Hedry[7] obtained a positive growth in 63% of diseased gall bladders removed at operation. E. S. Judd[1] made cultures of the gall bladder wall of gall bladders removed at operation and obtained a positive result in 29%. The observations show the futility of so-called medical drainage of the gall bladder with the duodenal tube.

Cholecystectomy is the logical procedure when it is possible to perform it. But careful search must be made for associated pathology and the post operative course must be closely followed if good results are to be obtained.

RESUME

1. The rich lymphatic anastomosis, either direct or indirect, between the gall bladder and other abdominal viscera such as the appendix, liver, pancreas, duodenum and colon show the importance of considering the gall bladder as only a unit of a system closely connected by the lymphatic supply.

2. Such a conception may explain why apparent failure sometimes follows simple cholecystectomy. The symptoms may have been due to pathology of greater degree elsewhere or to residual foci left in other organs.

3. The poorest results are obtained after operation for chronic cholecystitis without calculi because the foregoing conception is not widely entertained.

4. There is a growing tendency to replace the time worn diagnosis of chronic appendicitis by chronic cholecystitis when the evidence is vague or incomplete.

5. An early diagnosis may be made only by carefully considering the history, physical findings and laboratory results.

6. The most important recent advance in diagnosis is cholecystography.

7. Surgery is the logical method of treatment as infection exists in the gall bladder wall as well as in the bile. Post operative care should be directed to possible residual foci in the liver, duodenum, pancreas and colon.

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A NEW SELECTIVE POINT FOR AMPUTATION OF THE INDEX FINGER

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Introduction. It is the purpose of this paper to show that when it is necessary to amputate the index finger, at or between the second phalanx and the second metacarpal bone, the specific point of amputation should be located at the centre of the middle third of the second metacarpal bone, in individuals possessing an otherwise normal hand; and also to give the members of the profession the benefit of my experience and observations on a considerable number of operations that I have performed on the index finger. Should the distal phalanx need to be amputated, such an operation would not come under the scope of this article. (Figs. 1 and 2, Case 1)

Figs. 1 and 2. Case 1.

This operation, I am aware, is a radical departure from the present accepted treatment, by many authorities,[7] on surgery of the hand. To depart from the orthodox or conventional manner of doing a thing, more often invites criticism rather than investigation. The beliefs and opinions which guide our actions are not always founded on the adamantine rock. Quite often we just merely think so. We are reluctant to depart from the well beaten way our predecessors have blazed for us, but occasionally someone strays into a by-path and makes a discovery or picks up a bit of knowledge useful to science, helpful to humanity and of economic gain. It took a long time to discover that the eye of the needle was in the wrong place, but it was finally pierced in the other end of the instrument. It was a small thing, yet it would be hard to estimate the value of having made such a change. I make these brief observations for the purpose of showing that the habits we form, the line of thought laid down to us, are so firmly imbedded in our minds, that we hesitate long before we consent to make a change, though we believe we are correct. Nevertheless we make progress and once a change is made it is generally for the better.

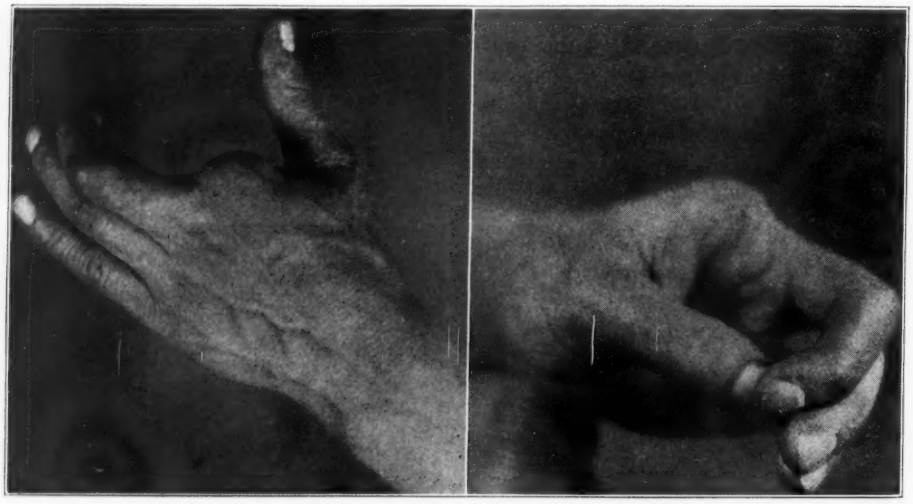
I am convinced that the selective point for amputation of the index finger at the middle of the second metacarpal bone, as herein explained, possesses many advantages over the present accepted classical operation for the following reasons:

1. Greater restored function.
2. Greater strength, sensitiveness and usefulness.
3. Better cosmetic results.
4. Greater economic results.

5. More easily performed, in a clean field, without complicated anatomy.

Adventuring in a New Field. My reason for adventuring into a new field for the amputation of the index finger came about in the following manner: Eighteen years ago I was called to treat a member of the life saving crew who was acting in the capacity of surfman. This man, aged 30, was stationed at an isolated point twenty-five miles from my office. The accidental discharge of a gun he was handling blew off his index finger at the middle of the second phalangeal bone. Being a firm believer in the teachings of John B. Murphy relative to the early use of anti-tetatnus in every case of gun shot wound, and being unable to obtain the serum for several days, I decided to remove the finger in a field free from infection, where the wound would heal by primary intention and also be free from the liability of developing tetanus. The results obtained proved to me to be of scientific value by observing the dynamometric readings of both hands, and the final results astounding. The dynamometric reading on the hand operated upon showed 440 as compared to 320 of the normal left hand. The two major functions of the hand were practically restored, viz., strength and sensitiveness. The operation as performed then, and many times since, has shown the same uniform results in every case; increased strength, sensitiveness, practically normal usefulness and of great economic gain to all concerned. It may be of interest to state that the patient upon whom I operated developed such a perfect cosmetic and functioning hand that, in a service which requires perfect physique, he was gradually promoted until now, and several years past, he has been a Captain in the United States coast guards, and is now considered one of the most efficient, in this service, on the great lakes.

It is my object to show in a concise manner several reasons why the present classical operation should be abandoned and to present an operation that would give much better results. By means of descriptions, photographs and schematic drawings I hope to convince the surgeon and the layman of the necessity of obtaining a more selective point for amputation; an operation that is easily carried out, practically free from complicated anatomy, thus securing for the patient a stronger and a more useful hand. It has been a common slogan among surgeons, in amputating the index finger to save as much of the finger or every scrap of tissue, as possible, as the smallest portion that can possibly be saved is of value to the patient As a result of such teaching and practice, many irregular operations have been performed which terminated in useless or poorly functioning fingers, besides, in some cases incapacitated hands. (Figs. 3 and 4, Case 8.)



Figs. 3 and 4. Case 8.

A review of the literature would lead one to believe that the subject of amputation on the index finger was a closed issue; that all of value

had been said and that a classical operation, which could not be improved upon, presented and accepted. A very large number of useless index fingers, besides incapacitated hands, as a result of amputation or re-amputation, since my first experience, led me to investigate the cause and to select a more suitable site for amputation, which would positively give the patient a stronger and a more serviceable hand. I believe, however, that the subject of amputation as applied to the index finger has been greatly neglected; that the proper site has not been selected for amputations at or between the middle third of the second phalangeal bone and the second metacarpal bone. I have based my opinion upon personal observation of my own cases, and those of others, which have been operated upon by the old methods that turned out badly. Many of the cases operated on by very able surgeons presented fingers that were little less than useless. About the only thing that might be said in favor of the classical operation would be that the finger had some length; other than that, the finger served no useful purpose. The only criticism that I would make relative to a surgeon performing an amputation at any level of the index finger that was attended by such failure to serve any useful function, would be considered under three heads: that he followed the rule that had been taught him to save every bit of tissue, believing that was the important issue, therefore, losing sight of the real objective—restored function, strength, cosmetic result, economic result and usefulness; second, that the patient would not give consent to have any great amount of the finger removed; third, that the subject had not been given the proper consideration from a physiological or pathological standpoint.

While considering the failure, there might be food for thought in taking into consideration the

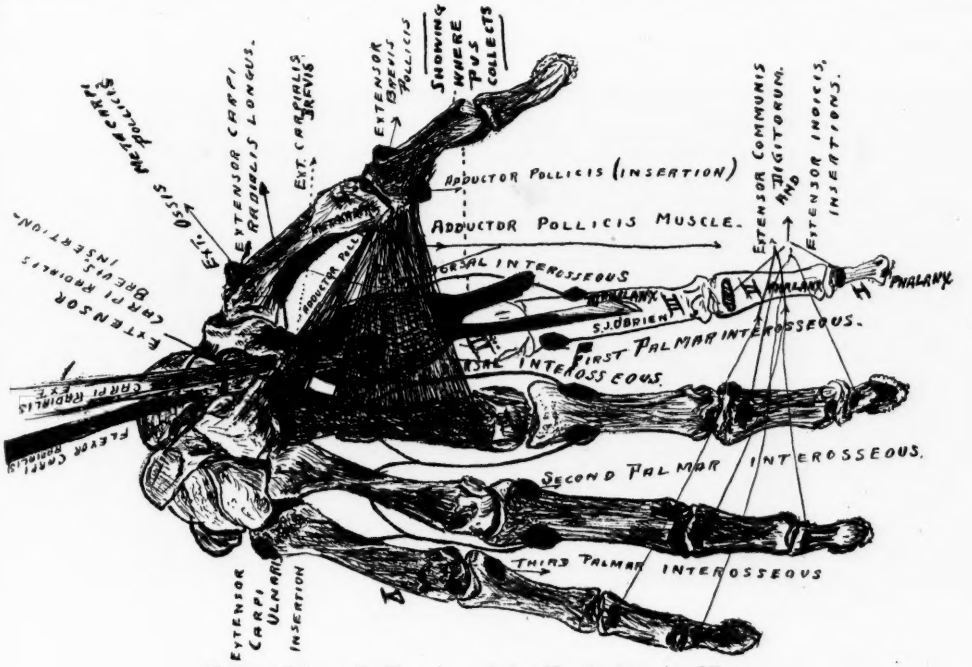


Fig. 5. Schematic Drawing of the Hand: Anterior View

statement, by Kanavel, in his masterly work in Surgery of the Hand, that there is an inadequacy of general knowledge of the anatomy of the hand in application to specific conditions. Although an operation for the removal of the index finger or any part of it has been classified as a minor surgical operation, the anatomy is very important, and should be given greater consideration.

SURGICAL ANATOMY OF THE HAND

Classical Operation. 1. The surgical anatomy for amputation of the index finger is an impor-

tant factor to be considered in performing the accepted classical operation.

In performing any of the standard classical operations for amputation of the index finger, it is well to keep in mind constantly, first, a knowledge of the level of the inter-phalangeal joint; second, the arrangement of the tendons and their tendon sheaths, and to remember that they gape widely after section; third, the mode of attachment of the tendons, their action and function.

2. It might be well to point out that the flexor tendons have a fibrous sheath extending from the proximal end of the distal phalanx to the metacarpal phalangeal articulation, and that these sheaths are thin and collapsible opposite the joints, but thick and rigid opposite the shaft of bone. The fibrous sheath is called the theca and when cut it should be closed, otherwise it may carry infection to the palm of the hand. The amount of infection in the index finger, after amputation, has a direct bearing on the success or failure of the operation, not alone on the index finger, but on the whole hand, and in many cases the whole body.

3. Most surgeons are familiar with injuries of the index finger attended with progressive infection, and the positive course which it follows. In every case when pus ruptures from the sheath of the index finger it enters the thenar space, in the area of the thenar eminence.

Superficially its internal boundary is indicated by the adduction crease of the thumb. It lies wholly upon the radial side of the middle metacarpal. The space lies deeply in the palm, just above the adductor transversus. Infection having traveled in this space has very often resulted in limitation of motion of the whole hand. (See schematic drawing.) The flexor profundus digitorum is inserted into the base of the last phalanx. Fig. 5. The tendon perforates a tendon of the superficial flexor opposite the first phalanx of the index finger. It is bound to the first and second phalangeal bones by ligaments which form a sheath common to it and the sublimis tendon. *Action.* Flexion of the third phalanx primarily, and after that, flexion of the second, and slightly, of the first. *Nerve Supply.* The ulnar and anterior interosseous branch of the median. The flexor profundus sends back accessory bands which are attached to the middle phalanx, almost as far as its center, and it is necessary to remember that the attachment is retained when the amputation is performed below that point, obtaining a movable joint.

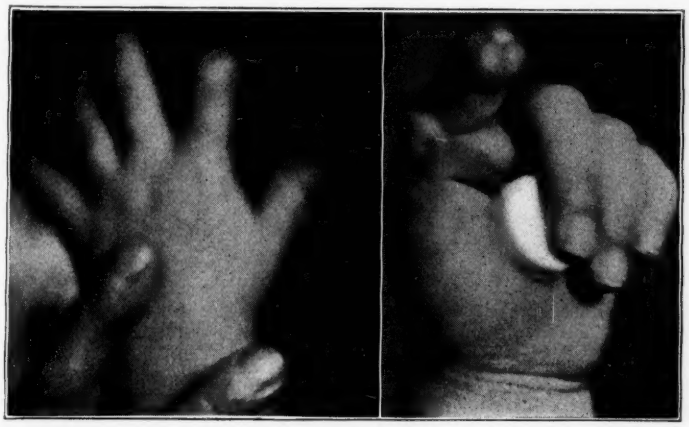
Figs. 6 and 7. Case 2.

W. T. Thomas[4] and others furnish some interesting notes on amputations. Thomas cites that he has performed many re-amputations in recent years and most often on fingers. The specific location being at the metacarpo-phalangeal joint. It is generally agreed among surgeons that the most common cause for re-amputation has been a tight scar across the bone, painful in

most cases, infection and ulcerating from tension in others, etc. The deductions were that an attempt had been made to save too much; failure to handle the tendon problem properly, or the result of faulty technic—sometimes one cause, sometimes another, and occasionally both. Thomas states that amputations through the second phalanx have good results if a good covering can be obtained, and a movable interphalangeal often obtained, owing to the tendons having insertions to the second phalanx; but an amputation to the first inter-phalangeal joint, unless the tendons can be secured over the end of the first phalanx, leaves a stump composed of the whole of the phalanx, which is hardly capable of being flexed or extended except to a limited degree and becomes a real hindrance from its inability to follow the other fingers in opening and closing the hand. This applies also to amputations to the first phalanx. If it is found impossible to save enough tendons to suture over the end of the bone, prolong the incision, make two flaps here so as to obtain enough length of tendons and remove some of the first phalanx so as to suture the tendons over the bone. In this situation the digital nerves are distinctly seen, and it is wise to remove a piece of each, so that the end cannot be incorporated in the scar.

DeCosta advises,[5] when it is necessary to amputate the index finger above the middle of the middle phalanx, the attachment of the flexor tendons will be cut off and the finger will be liable to project directly backward, so that it is better to disarticulate at the metacarpal joint, or stitch the flexor tendons to the periosteum. DeCosta advises, to amputate at a point where most surgeons are agreed, is the point of selection that calls for more re-amputations on the index-finger than at any other point, indicating the site is not well chosen.

Figs. 6 and 7, Case 2. Illustrates the hand of a laboring man, age 40, who had his index finger severed at the distal end of the second phalanx by a saw while working in a sawmill. Amputation was performed through the second phalanx. Fig. 3 illustrates hand opened and all fingers extended. Apparently normal extension. Fig. 4 illustrates the same hand with the patient endeavoring to flex the hand and index finger. The patient cannot flex the index finger because the flexor tendon retracted up the tendon sheath, as the tendon sheath was not properly united. The finger serves no useful purpose and is a real hindrance to the patient. The dynamometric reading is 120 as compared to 320 on the normal hand.



Figs. 8 and 9. Case 3.

Figs. 8 and 9, Case 3. Show the hand of a child aged 3 years, who had his index finger severed by a meat grinder. An attempt had been made to graft the severed member. Failure to graft the severed part necessitated the completion of the amputation. The tendons retracted up their sheaths. Failure to obtain the consent of the parents to permit amputation at the center of the middle third of the second metacarpal bone compelled the surgeon, to follow the rule, save as much tissue as possible, and amputate the finger at middle of the middle third of

the second phalangeal bone. About the only thing that may be said in favor of the operation performed would be that the finger had length; other than that it served no useful purpose. Fig. 8. Shows the hand with all fingers extended. Fig. 9. Illustrates same case with patient trying to close the hand. The index finger cannot be flexed over the lozenger because the flexor tendon and extensor tendons were not properly united in the presence of an infection, and finally retracted, leaving a useless index finger, with, also, a 50% decrease of strength in the hand.

Fig. 10, Case 4. Shows the hand of a man, aged 36, who had the posterior half of the index,

Fig. 10. Case 4.

middle and ring fingers severed by a planer. Amputation took place at the second phalangeal bone on each finger. An amputation would not be performed at the second metacarpal bone, because the hand was not otherwise normal. The nature of injury permitted sufficient flexor and extensor tendons to be brought over the ends of the stubs and properly sutured. Illustration shows hand flexed over dynamometer. The picture illustrates all that the present classical operation on amputation of fingers could hope to obtain; namely, flexion and some useful function. There is, however, a 50% loss of strength in the hand.

Fig. 11, Case 5. Shows the hand of a laboring man, aged 40, whose fingers were amputated at the distal end of the first phalanx. Dynamometric readings—110 for the injured hand and 280 for the normal hand.

Fig. 12, Case 6. Shows the hand of a man, aged 30, whose finger was amputated at the distal third of the first phalanx. Dynamometric readings—120 and 240.

Fig 13, Case 7. Shows the hand of a man, aged 26, whose index finger was amputated at the middle third of the first phalanx. Dynamometric readings—180 and 320.

Cases 5, 6 and 7. Figs. 11, 12, 13 demonstrated stumps of index fingers which are hardly capable of being flexed or extended, except to a limited degree, and they are certainly a real hindrance to the patient from their inability to follow the other fingers in opening and closing

Fig. 11. Case 5.

the hand; furthermore, they add no strength to the hand and are devoid of any cosmetic value.

Figs. 3 and 4, Case 8. Show the hand of a skilled laborer, aged 30, who received an injury to the index finger, attended with infection. Amputation was performed at the metacarpophalangeal joint. Fig. 1. shows the hand of the patient endeavoring to extend the fingers. Infection having travelled along the tendon sheath to the thenar space, necessitated opening, attended with limitation of motion of the middle finger, thus preventing complete extension. Fig. 2 shows the hand in complete flexion, attended with considerable limitation of motion. Dynamometric readings—120 and 320. This patient was paid for the loss of a finger and about a

year later had his case re-opened and was awarded $2,500.00. The largest number of re-amputations take place at this point.

Fig. 14, Case 9. Illustrated the first case in which I selected the center of the middle third of the second phalangeal bone as the site for amputation for injuries and malignant tumors affecting the second phalangeal bone. The figure illustrated all that could be hoped to be obtained by any operation where a part was removed. The two major functions of the hand have been restored, viz: strength and sensitiveness. The dynamometric readings of the hands shows a 440 of the injured hand as compared with 320 of the normal hand. Attention is called to the cosmetic result.

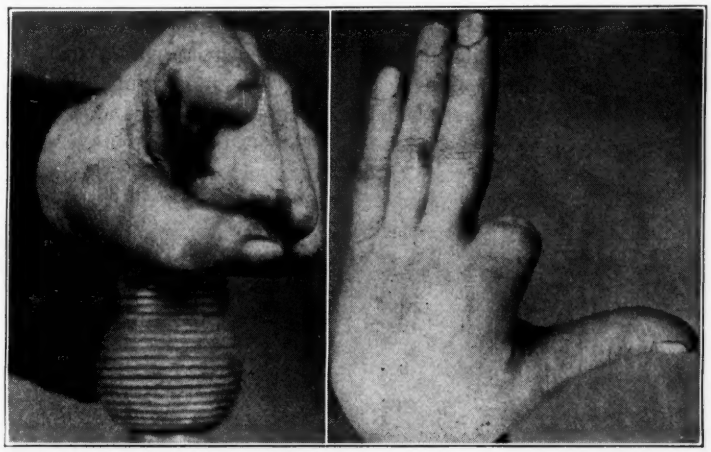
Fig. 14. Case 9.

Figs. 15 and 16 show the arrangement of the flexor and extensor tendons; interosseous tendons, schematically, as pointed out in anatomy of the hand.

Fig. 17. Shows a schematic drawing of the arrangement of the interosseous muscles and tendons. See anatomy.

Fig. 5. Shows a schematic drawing of whole hand, with descriptions.

The simplicity of the writer's operation in a field relatively free from complicated anatomy,



Figs. 12 and 13. Case 6.

and the completed operation meeting almost perfect attainment in function, usefulness and strength and also the hand considered from a cosmetic and economic standpoint should make it an operation of choice.

It will take considerable persuasion on the part of the surgeon to demonstrate the merits of removing the finger and part of the metacarpal bone to obtain a better hand. It may require as much persuasion, on the part of the surgeon to obtain the patient's consent for the removal of the whole finger as it once did to induce a patient to submit to an operation for appendicitis or an amputation of the leg for a diabetic gangrene of the toe.

SURGICAL ANATOMY OF THE SELECTIVE OPERATION

Fig. 5. The interossei dorsales[7] are the muscles between the metacarpal bones on the back, four in number. The first, and the largest, is called the abductor indicis. They are located between each interspace in the back. The origin is between the two bones between which it lies. Insertion is made into the base of the first phalanx, and also into the extensor tendon of the

same finger, the first on the radial side of the index, the second on the radial side of the medius, the third on the ulnar side of the medius, the fourth on the ulnar side of the annularis. *Action:* each abducts from a line coinciding with the long axis of the middle finger. This digit, having two interossei inserted into it, is abducted toward the radial side by one, and toward the ulnar side by the other, thus, each in turn becomes an abductor, for the finger abducted by one is then restored to the midline by the other. *They also flex the first phalanges and extend the second and third. Nerve.* The deep branch of the ulnar. Adductor pollicis—the adductor of the thumb. Origin—One head; os magnum, bases of the second and third metacarpals, and the annular ligament; the other head; the lower two thirds of the third metacarpal. *Insertion*—the inner side of the base of the first phalanx of the thumb, in common with the inner insertion of the flexor brevis pollicis. Action, adduction and flexion of the thumb. Nerve, the ulnar.

Fig. 15.

SELECTIVE OPERATION. THE AMPUTATION OF THE SECOND METACARPAL BONE AT ITS MIDDLE THIRD

Proper asepsis. An incision is made over the second and first phalangeal bones and as far as the middle third of the second metacarpal bone. The tissues are retracted exposing the first dorsal interosseous, severing it at its point of insertion to the first phalanx of the index finger. Complete the incision in the form of Malgaigne's racket, which is somewhat Y-shaped, its long arm being on the dorsal surface. The soft parts are carefully separated, and the metacarpal bone severed with a wire saw or a bone forceps. Care should be exercised not to injure the palmar arch, which crosses on the palmar side of the bone near its proximal end. The tendons are brought into view and severed. Fig. 5. The first dorsal interosseous tendon is sutured, with silk, to the second dorsal interosseous, at its point of insertion. Bleeding is prevented by forceps pressure. Tissues are properly approximated and sutured with horse-hair or dermal. The completed operation should be attended with a clean wound, without tension, perfect asepsis, simple hemostasis, and an operation attended with very little trauma. The operation secures the major function of the hand—namely—strength, motion and sensation. The operation

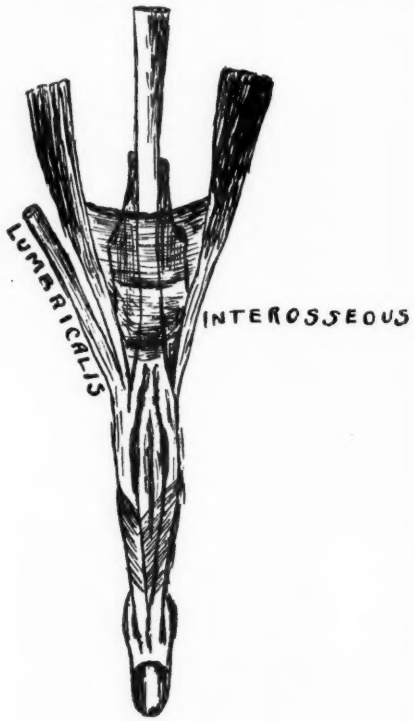


Fig. 16.

being performed without inflammation prevents limitation of motion. The median nerve being severed high up allows the middle finger to carry on the specialized function of the index finger. It is important that the manual worker have sensation in the hand, especially so if the area is in the distribution of the median nerve, as it constitutes the principal part of the hand. It has been pointed out by Bunnell[6] that the severance of the volar nerve at the base of the finger results in anesthesia of that half of the finger on its volar surface and in the last one or two distal segments on its dorsal surface. The severance of the index finger interferes to some extent with the sensation in the pulps of the index finger on account of its specialized use. With the loss of some of the tactile sense, a worker finds difficulty in picking up small objects, even when the classical operation has been performed perfectly. With the severance of the median nerve the joint sense also suffers and he is somewhat awkward and at times fumbles. The loss of function of the nerves of the finger is of vital importance. Removing the index finger with part of the metacarpal bone, permits the middle finger to take on the activities of the index finger to such an extent that there is no apparent loss of function manifested in the hand. *Usefulness.* There being no stub it is possible to perform practically every kind of labor that an individual might perform with his whole hand. *Strength.* It is an interesting fact that a hand operated on in the manner given, has greater strength than one that had not been operated on. Suturing the first dorsal interosseous to the insertion of the second interosseous and the comparative length of the middle finger over the index finger increase the leverage of the hand; also, greater work put on fewer fingers causes the fingers to develop according to the law of accommodation. The fingers will apparently over develop. The dynamometric reading will show a higher reading in the hand with four fingers than a hand with five fingers. It is a well known fact that the loss of an eye, a limb or a finger tends to develop more strength in the remaining eye, limb or fingers. Thus if nature had provided man with but two fingers in each hand, these two would no doubt be as strong as the entire five on each hand. Strength is not as essential as efficiency on the average. The crab, a member of the lowly order of crustaceans, exerts a relatively tremendous pressure with but a small pair of pinchers. Nature makes provision for all strength required and efficiency as well, thus the loss should neither impair efficiency or strength. There should not be any great disfigurement, if the interosseous tendons are properly placed and the basic principles of aseptic surgery carried out.

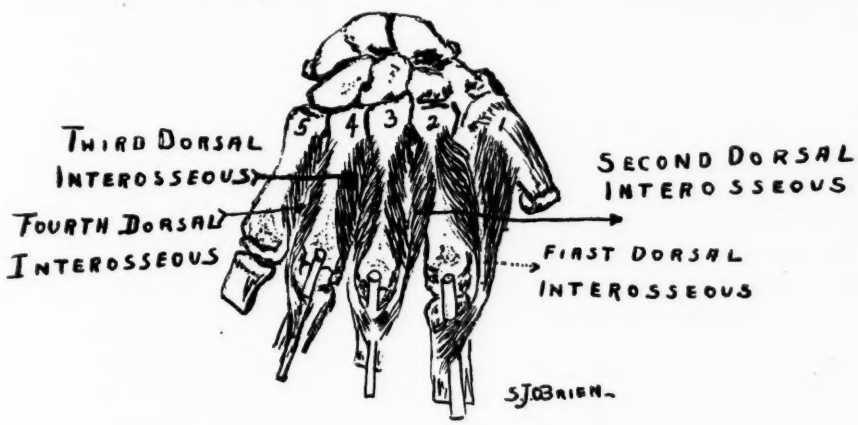


Fig. 17.

Economically. Under the Workmen's Compensation Act, an injured employe receives for the amputation of the index finger, thirty-five weeks compensation. If the finger is not amputated, but is crippled and no loss results therefrom, the injured employe receives nothing except medical and hospital treatment. If, however, disability results to the extent that the injured employe cannot resume the special employment he was engaged in at the time of the in-

jury, then the employe is entitled to a total compensation of five hundred weeks, and a maximum of $7,000.00; the rule being that the loss of the use of a member is not the same as loss of the member but the ability to earn in like or similar employment is a true measure of damages. If the employe can resume like or similar employment the measure of damages is compensation at the rate of sixty per cent. of his average daily wages for the actual time he was disabled from his employment, with a waiting period of eight days deducted.

I have left the economic value of the proposed operation until the last as there are some who can see a subject only from the standpoint of dollars and cents. The selective operation should be accepted on its merit, because the operation is performed in a clean field free from infection, a field where the avenues of infection are practically closed and furthermore, a field where there is no direct communication between the tendon sheath of the finger and the synovial sheath of the wrist.

The operation performed without inflammation prevents limitation of motion or loss of function to any of the other members of the hand. The operation should be one of choice in compensable amputations of the index finger for the reason that when the employe is compensated according to law, the case should remain closed and the employe would draw no further compensation. In cases of skilled employes after the first adjustment is made it would remain a closed issue. Many cases of skilled laborers, who have been compensated for the loss of an index finger have had their case re-opened and have drawn large sums of money from their employer, because the stump was troublesome or because an infection had travelled along the tendon or tendon sheath to the thenar space, necessitating opening of the hand, attended with inflammation, later limitation of motion, thus preventing the skilled employe from performing like or similar work and was compelled to resort to common labor. Case 8. (Figs. 3 and 4.)

Removing the finger with half of the metacarpal bone would give the employe a stronger and a more serviceable hand, with possibly a few exceptions. The operation should have a two fold value. The employer would be pleaseed to close his case and believe it was permanently closed, and be able to determine the cost for once and all; the employe would be able to return to work more quickly, assisting his employer, also satisfied with his immediate and adequate settlement, not being compelled to pay any great attorney fee, and also, satisfied to have a hand capable of performing practically every kind of labor that he had done with his normal hand.

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TWO CASES OF DIABETES*

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CHICAGO

The first patient, a woman, was admitted to the hospital in September in diabetic coma. She had been failing since May or June. On entrance she weighed 74 pounds, and presented the usual symptoms of diabetic coma. She was given large doses of insulin and the sugar disappeared. Then an attempt was made to increase her weight. The first diet consisted of 1,700 calories and this was increased until she was receiving 4,500 calories. During this time she was in bed with an icebag to her heart and neck. Her weight increased four pounds. She presented the classical signs of thyroid disease and was operated on December 2. Following the operation she had a rather stormy time. Within ten days her weight went up to 81 pounds and she continued to gain until at present she weighs 116 pounds. She is sugar free on a dosage of 40 units of insulin in the morning and 35 in the afternoon and her diet consists of 2,482 calories.

The second patient, a man, presented a very unusual set of findings. At the age of 19 he had rheumatism involving practically every joint. During this time he was delirious and injured his foot in some way so that gangrene developed. The history is not very clear at this point. The condition resembles somewhat a Raynaud's disease but lacks many of the classical symptoms. In the spring of 1924 he was

*Presentation of Clinical Cases before North Shore Branch Chicago Medical Society, March, 1926.

admitted to the Evanston Hospital with a diagnosis of diabetes. Under dietetic management and insulin he made a satisfactory improvement. In the spring of 1925 he again entered the Evanston Hospital; at this time he was constipated, could not get enough to eat, and had pains in his legs. He was given an enema, following which he developed an uncontrollable diarrhea. This has continued to the present time. He entered St. Francis Hospital a short time ago markedly emaciated and with a return of the diabetes. Investigation showed that different types of food had no effect on the diarrhea. x-ray examination of the gastro-intestinal tract showed the material passing through very rapidly. Proctoscopic examination was entirely negative. Because of the presence of hypospadias it was impossible to examine the genito-urinary tract. Finally the conclusion was reached that his trouble was due to the nervous innervation of the gastro-intestinal tract. He had a high metabolic rate, a pulse rate of 120 and so a thyroidectomy was performed. Since operation he is somewhat improved.

There was no question about the patient having had a toxic thyroid. He had a profound stimulation of the entire sympathetic nervous system. He still has a disturbance in the blood vessels and diabetes.

A COSMETIC MASTOID DRESSING FOR WOMEN

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CHICAGO

After an uncomplicated mastoid operation, the patient is generally well enough in a week or ten days to be ambulatory. The wound, however, may require dressing for a month to six weeks after; and though the patient may be otherwise quite well, the conspicuous bandage interferes naturally with even minor social activities.

As illustrated in the accompanying photograph, women can by the use of a scarf effectually conceal even the most elaborate head and mastoid bandage. As in this case, the scarf can be selected to match the woman's costume with a very excellent effect. For variety at least another scarf will probably be desired to go with various changes of apparel.

After the change of dressing in the office, the

Fig. 1. A cosmetic mastoid dressing.

woman adjusts the scarf in a few minutes before the mirror. It is placed around the forehead, twisted in back, brought up over the head, and ends in a bow on one side.

25 E. Washington St.

CHRONIC OTORRHEA

ITS RESPONSE TO CALOT'S SOLUTION*

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The question of successful management of chronic aural discharge confronts both the general practitioner and the otologist so frequently as to place it upon a dignified stand in the realm of medicine. It, as with other chronic conditions that are so difficult to contend with, is a source of discouragement to the physician and patient alike. The vague prognosis, and the potential sequelae in the form of a cholesteatoma, facial palsy, labrynthitis, sinus thrombosis, meningitis, brain abscess and finally the handicapping auditory deficiency that may occur, all serve as an incentive for determining some efficacious therapeutic approach that in the past has been but partially realized. Paralleling other pathologic conditions that respond so poorly to our efforts, the condition has been subjected to an attack of an imposing array of therapeutic procedures. A perusal of the standard texts and the verbose literature upon the subject will disclose an innumerable variety of medicinal agents, such as antiseptics of every known class, astringents and caustics of various types, powders of many kinds and many combinations of the above in the form of ear drops, all serving

*From the clinic of Drs. J. C. Beck and H. L. Pollock.

as a good indication of our therapeutic impotence.

A great deal of the unsuccessful results are due no doubt to superficial treatment which is dependent upon a poor conception of the basic pathology that underlies the persistence of an aural discharge. It is admitted that a great percentage of the acute suppurative otitides undergo spontaneous resolution and healing, this being most frequently the case in the ordinary acute catarrhal middle ear inflammations complicating an acute naso-pharygitis. Here the acute lesion is confined to the mucous membrane of the tympanic cavity. However otitis complicating scarlatina, measles and typhoid is notoriously difficult to heal and is frequently followed by a chronic discharge. In these cases the lesion is deeper seated, invading the submucous layers and even the underlying bone of the tympano-mastoid cavity. Here the mucosa may be destroyed with the formation of ulcerations and the destruction of the membrane may impair the integrity of the underlying bone, as the mucosa of the tympano-mastoid is anatomically a muco-periosteum from which the bone derives its blood supply, thus laying the basis for a chronic osteitis with its accompanying discharge.

The virulence of the offending bacteria is frequently the deciding factor in the extent of the infection and destruction, this being best exemplified in a case of streptococcus mucosus infection with its well known tendency towards rapid and extensive pathology. In those instances which proceed to relatively quick recovery, the ulcerations and the denuded bone are covered by granulations which serve as a base for the reparative ingrowth of the surrounding epithelium. In some cases the osteitis is of such an extent that local necrosis and fistula formation occur. Here chronic infection plays a major role and nature responds by the over-production of hypertrophic granulations. The condition of bone necrosis associated with excessive granulation formation is probably the most potent factor in the continuance of an otorrhea in those instances not due to cholesteatoma or chronic osteitis of the mastoid bone. The hypertrophic granulations prevent the ingrowth of the surrounding mucosa and the overgrowth of the granulations may be such as to fill the entire cavum and even project into the external meatus forming the so-called aural polyp. True polypi from a strict pathologic point of view are rarely if ever found in the middle ear, as Wagenhauser[1] has pointed out that aural polyps are always composed of granulation tissue and never show the histologic picture of a myxomatous structure. The granulations are the source of a thin secretion which in the presence of the usual secondary infection seen in practically every case, becomes purulent in nature. As long as the granulations continue to grow unchecked and the infection persists, healing cannot occur and the discharge will continue.

The Eustachian tube may also be a factor in the production or maintenance of a chronic otorrhea. As is well known, the normal patent tube may serve as a means of drainage of the middle ear secretions into the naso-pharynx. Frequently, however, the pharyngeal orifice may be occluded by a hypertrophic adenoid structure or by enlarged lymphoid follicles in Rosenmuller's fossa or even in the salpingal mucosa itself. Less frequently posterior turbinal hypertrophies or synechiae following adenoidectomy may cause tubal closure. Paradoxically a patent tube may be the source of a discharge which will be found to accompany every acute rhinitis. The discharge is in reality a pseudo-otorrhea and is due to an overflow of secretions and inflammatory exudate from both the tube itself and the naso-pharynx through the middle ear and thence by the tympanic perforation into the external canal. This psuedo-otorrhea which has a characteristic mucoid appearance is a type that is so frequently observed occurring in a well epidermized radicle mastoid in the presence of an acute rhino-pharyngitis.

Cholesteatoma and chronic infective mastoiditis are prolific offenders in the causation of an otorrhea, but as their treatment is strictly surgical they are but mentioned in brief. Local pathology due to malignancy or rare infection as with actinomycosis, and local manifestations of systemic disease as tuberculosis, lues or diabetes are also mentioned in passing. From the above one may readily see that chronic infection, excessive granulation formation, osteitis with fistula formation and tubal disturbances are the leading factors in the maintenance of a chronic otorrhea and consequently any therapeutic measure in order to be successful must be able to cope with them.

Chronic osteitis with fistula formation is notoriously difficult to heal in other parts of the body and the same holds true for the mastoid portion of the temporal bone. One may by analogy compare the discharging ear to either a fistula leading to carious bone or a fistula in ano. In one we observe a fistulous tract leading from the skin to carious bone, that is from the external meatus through the perforation in the drumhead into the granulation lined cavum to the carious bone of the ossicles or the tympanum. In the other we observe a fistulous tract leading from skin to a mucous membrane, that is from the skin of the meatus through the perforation via the cavum and Eustachian tube to the mucous membrane of the naso-pharynx.

Fotiade,[2] who lays great stress upon the pathologic similarity depicted above, was struck by the remarkable success that he witnessed at the Filantropia-Spital in Bukarest in the treatment of fistula in ano with a mixture known as Calot's solution that is composed as follows:

Guaiacol	1.0
Creosote	5.0
Ether	30.0
Iodoform	10.0
Olive Oil	70.0

The pharmacodynamics of the mixture was investigated by Coyen, Fussinger and Laurance,[3] who attributed to the iodoform, guaiacol and creosote a caustic action upon the granulations in addition to their antiseptic properties. The ether served the purpose of dissolving these secretions that covered the granulations and so allowed the more active constituents a more intimate contact with the pathologic tissue. Furthermore, the instillation of the mixture caused an active diapedesis of the polymorphnuclear leucocytes, thus increasing bacteriolysis. They also state that the disintegration of the leucocytes releases their content of proteolytic and lipolytic enzymes to aid the bacteriocidal activity and destruction of the granulations. They observed a marked change in the character of the discharge, which under the influence of the mixture changed from that of a thick mucoid appearance to a thin and serous nature. The secretions increased in amount and showed decided changes in the microscopic picture. The bacteria and few mononuclear lymphocytes so characteristic of chronic aural discharge soon disappear and it shows instead large numbers of polymorphnuclear leucocytes and no bacteria.

In a series of 64 cases Fotiade was enabled to obtain a complete cure in 61, or 95 per cent. Of the remaining cases one died of tuberculosis, one was lost sight of and one not responding to therapy required a radicle mastoid operation. We have not been quite so fortunate. In 81 cases of otorrhea selected for treatment we obtained a cure in 66, or 81 per cent. The cases were grouped as follows:

1. Otorrhea; no mastoid involvement shown by x-ray	31
2. Otorrhea with mastoid sclerosis shown by x-ray	38
3. Cholesteatoma	12
Total	81

Of those cases listed in class 1 all were cured, although a tonsillectomy and adenoidectomy was performed in nine of the cases.

In class 2, thirty-five were cured and three cases associated with a discharge of long duration and exhibiting marginal perforations but no clinical evidence of cholesteatoma requred a radicle operation. In addition attention to the naso-pharynx was required in six cases; tonsillectomy in four instances and breaking up of postadenectomic adhesions about the tubal opening in two cases.

In class 3 not one was benefited in the least, although Fotiade has reported definite cure in cholesteatoma. The odor, however, was rendered less offensive.

Audiometric records controlling the effect of the treatment upon the hearing showed only moderate gains in the majority of cases and this feature will be reported in detail later.

The treatment consisted of simple cleansing of the ear, mainly by the use of tubular suction. The patient was then instructed in the use of the medicament. He was told to carefully shake the bottle and with the head bent to one side with the affected ear uppermost to instill 5 to 10 drops of the solution into the canal. The opening of the canal was then closed by pressing the tragus against the canal wall and bringing alternate pressure to bear upon it, so as to effect a pumping action upon the mixture, thus causing it to be forced into the cavum. If this is properly performed and the Eustachian

tube is patent the patient will taste the medicament in his throat. This is performed nightly for a week, and no other attention is required, when the patient is again observed by the otologist. At this time the secretion will have changed from a thick, ropy, to a thin, serous nature. At this stage the medicament is discontinued and insufflations of boric powder used. After a few days the ear will appear dry. Those cases that do not succeed at the first trial require attention to large pouting granulations or investigation of the naso-pharynx. In the former local applications of 60 per cent silver nitrate may reduce the granulations to such an extent as to allow of the successful use of the mixture. In the latter appropriate surgical intervention may be necessary.

Conclusions:

1. Calot's solution is an efficacious medicament when employed in properly selected cases of otorrhea.

2. That its use is rational is attested by its pharmacodynamic action upon the basic pathology underlying certain types of chronic aural discharge.

3. Most cases of otorrhea not due to cholesteatoma and not predicated upon a tuberculous, luetic, diabetic or a local malignant or actinomycotic basis, respond readily to its use.

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3. Quoted by Fotiade in the above.

AN OBSERVATION OF SYPHILIS AND ITS TREATMENT IN PATIENTS ADMITTED TO A TUBERCULOSIS SANITARIUM*

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Introduction: The ubiquity of tuberculosis and of syphilis as separate and distinct diseases is well known. In view of the prevalence of these infections there should be no surprise that a certain percentage of the tuberculous have syphilis and vice versa. The possibility of the co-existence of these two common maladies should be kept in mind by every clinician, for it is only then that the dual infection will be recognized and coped with intelligently. Elliott,[1] Marshall.[2]

The controversy in methods of diagnosis and treatment of syphilis in the tuberculous has been bewildering, almost chaotic. The diversified opinion as to the presence of syphilis is pivoted around the Wassermann reaction. Some investigators contend that a positive reaction is in itself undecisive; Pottenger,[3] Keys,[4] Petroff.[5] Mitchell,[6] while others contend the contrary. Corper, Gekler and Sweany,[7] Snow and Cooper,[8] Ford,[9] Kilduffe,[10] Kolmer.[11] The specific treatment of this dual infection likewise reveals differences of opinion. Potter,[12] Hartley,[13] Schlomovitz,[14] Carter,[15] Bowman,[16] Babcock,[17] Bine,[18] Ornstein.[19]

The clinical entity of pulmonary syphilis, because of its close clinical resemblance to phthisis and its established rarity, as some text-books lead us to believe, is still in oblivion; and is commonly undiagnosed; moreover, often erroneously diagnosed as tuberculosis and treated non-specifically. Lyon,[20] Councilman,[21] Munro.[22] Other observers believe that pulmonary syphilis is more common. Rukstinat.[23]

The importance of a routine Wassermann test in tuberculosis, as verified by various authors, is with a sound foundation. Pritchard[24] states that in a review of 406 tuberculous patients from 3% to 4% showed positive reactions, Conner found in a study of 547 males 9% positives, and of 380 females 8% positives. Corper, Gekler and Sweany in their observation of 1,395 male patients found 7.2% positives, and of 1,399 female patients 5.8% positives. Our observation of 1,460 patients showed 8.3% positive reactions. The observation was studied still further and it was found that approximately 5.4% of the positive Wassermanns had a positive sputum, while 2.9% had a persistently negative sputum.

In order to ascertain the reliability of the complement fixation test not only were the sera routinely examined but repeatedly so and provocative tests done on all questionable reactions. The results thus obtained were as follows: Of 36 positive sputa patients, 78% showed a persistent positive reaction, and of 22 negative sputa patients 73% were persistently positive; thus corroborating first the fact that positive reactions in open cases are essentially as accurate as in

[1] This observation was made possible through the courtesy of Dr. R. W. Dunham, Former Medical Director.
*Read before the Chicago Tuberculosis Society, April 14, 1927.

negative sputum cases; and secondly, that such percentage of persistent reactions falls well into the realm of feasibility in the non-tuberculous.

Diagnosis: The diagnosis of a dual infection is based on the presence of a positive sputum or definite findings of tuberculosis with or without concomitant symptoms and findings of syphilis plus a persistent positive Wassermann test of the blood or spinal fluid. The diagnosis of syphilis of the lung is encountered with more difficulty and dispute for its clinical resemblance to tuberculosis is astounding.

The symptomatology of lung syphilis is characteristic. Dyspnea is the most frequent complaint. (Thompson,[25] Robinson.[26]) The patient complains of what he terms asthmatic attacks. On closer questioning it is revealed that these paroxysmal attacks come on at night usually while at sleep with a smothering sensation and a gasping for air with inspiratory difficulty.[27] These attacks are sometimes so severe and prolonged and so dramatic that morphin is necessitated for relief. At other times the patient is awakened with a paroxysmal cough.

In our observation of 14 patients having a constant positive reaction with negative sputum 71% presented the characteristic symptoms; while of the 23 with positive sputum only 17% had these symptoms. Such symptom syndrome, if in the presence of a negative sputum and if confirmed by other concomitant symptoms or findings of syphilis or a persistently positive Wassermann, is pathognomonic of pulmonary syphilis. The therapeutic test is the confirmatory procedure.

The physical findings may simulate that of tuberculosis, but usually the large sonorous rales are heard at the base and are commonly unilateral. Unlike pulmonary tuberculosis, roentgenologic studies show that syphilis usually tends to invade the lower and middle lobes and to involve the tissue of the hilum first so that the densest shadow is there, diminishing toward the periphery. (Watkins,[28] Baum.[29]) Repeated plates must be taken before and after antiluetic treatment to determine definitely whether certain shadows may be interpreted as luetic.

The pathology of tuberculosis is commonly demonstrated on the post-mortem table; while that of pulmonary syphilis very much less commonly. Osler[30] states that in 2,800 postmortems at Johns Hopkins Hospital there were 12 cases with syphilitic disease of the lungs; in 8 of these the lesions were in congenital syphilis. Fowler was able to find only 12 specimens in the museum of the London Hospital of the Royal College of Surgeons. Carrera[31] in Warthin's laboratory found 12 cases among 152 necropsies.

The pathologic changes may be in a form of a solitary gumma, diffuse syphilitic fibrosis, or a diffuse syphilitic broncho-pneumonia. Secondary involvement of the pleura may give rise to a syphilitic pleuritis.

The differential diagnosis of pulmonary syphilis requires a careful study and an inherent ability to evaluate all clinical, laboratory, and roentgenologic findings at hand. Pulmonary tuberculosis or its complications are differentiated by sputum examinations and x-ray findings. Asthma, unlike pulmonary syphilis, is characterized by an expiratory difficulty; furthermore, x-ray and serological findings may help to differentiate them. Cardiac asthma is characterized and thus differentiated by its systolic hypertension. (Pratt,[32] Longcope.[33]) Aortic aneurysm and tumors of the lung may be distinguished by roentgenogram shadows and physical findings; pneumonoconiosis by the occupational history and physical findings of a deep immobile and silent chest. Cardiac decompensation should give no difficulty nor should pneumonia. Pulmonary abscess and bronchiectasis should be ruled out on the basis of the history, amount and character of the sputum, together with roentgenological and serological findings.

Treatment: The question of treatment in the tuberculous with syphilis is mooted. Ehrlich originally included advanced cases of tuberculosis among the contra-indications. Subsequent observations, nevertheless, show that with care such individuals need not be deprived of salvarsan. In an analysis of 375 cases treated with salvarsan, Sieskind[34] states that he has treated patients with hemoptysis and with phthisis in varied stages without ill effect, and always with general improvement and increment in weight.

The treatment of lung syphilis is undisputed. Neosalvarsan given intravenously is the choice treatment. Mercury and iodides if used as adjuncts should be employed with caution. Patients with a dual infection or with a definite pulmonary syphilis alone and who have either a favorable or guarded prognosis[35], should be given the benefit of anti-luetic treatment. An

unfavorable prognosis is the only definite contra-indication. Hemorrhage cases should be given small doses and over prolonged intervals. It is even advisable to discontinue the treatment for the time being. In our series we were not able to observe any patients with nephritis either before or after treatment.

Results: Our results with the use of neosalvarsan thus far are as follows: Out of 26 patients with a double infection, 12 were classed with a favorable prognosis, 8 guarded and 6 unfavorable. Of the favorable class 83% improved, 8.5% were unimproved, and 8.5% died. Of the guarded class 50% improved and 50% died. Of the unfavorable class 67% died, 16.5% unimproved, and only 16.5% improved. Only 3, or 11.5% of this series of cases had hemoptysis after treatment was instituted.

Of 17 patients with repeatedly negative sputum and positive Wassermann, 10 were classed with a favorable prognosis, 2 guarded, and 5 unfavorable. Of the favorable 90% were improved, 10% were unimproved. Of the guarded class 50% improved and 50% unimproved. Of the unfavorable class 20% died, 40% unimproved, 40% improved. Only 1, or 5.9%, of this series had hemoptysis. There was an amelioration in the severity and frequency of the characteristic symptom syndrome in all patients treated. The serological results in those treated showed that 21% of the total 43 cases became negative. The 19 patients who were not treated, strange to say, showed a parallel clinical course as did the treated; however, none, needless to say, developed a negative Wassermann or showed the spectacular abeyance in the pathognomonic symptoms.

SUMMARY

1. Syphilis and tuberculosis do co-exist.

2. The Wassermann test in the tuberculous is as reliable as in the non-tuberculous.

3. Repeated complement fixation tests should be done routinely.

4. Syphilis of the lung is more common than pathologists lead us to believe.

5. There are definite clinical, physical and roentgenologic findings to make pulmonary syphilis a distinct clinical entity.

6. Neo-salvarsan should be given to all pa tients having a definite positive Wassermann with or without symptoms of syphilis.

7. An initial unfavorable prognosis is the only contra-indication for the use of anti-luetic treatment.

8. The use of neo-salvarsan mitigates the severity of the characteristic symptoms syndrome, and renders an appreciable percentage of positive Wassermanns negative.

9. The much feared symptom of hemoptysis is no contra-indication for the use of anti-luetic treatment.

10. Further careful study of the subject of syphilis in the tuberculous and lung syphilis as an entity is the hope of the writer.

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IS MEDICAL LEGISLATION NECESSARY?*

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One would think that this question requires no discussion and take it for granted that medical laws are essential for the protection of the public health.

We have heard it maintained by certain men and women, who are apparently sane on other subjects, that it is not necessary for the State to adopt safeguards and license only those who have prepared themselves by education and training to treat the sick; but that the practice of medicine should be free to all, and that competition will eliminate the unfit.

These misguided people maintain that all laws for the regulation of the practice of medicine are in the nature of a monopoly and are advocated for the purpose of forming and perpetuating a medical trust.

These same people who clamor for so-called freedom in the practice of medicine would be reluctant to risk their lives in a trip across the ocean if the captain and the pilot of the vessel had not had a thorough training and had passed a rigid examination to make certain that they were competent to do their work.

Nor would they wish to ride in a train if the engineer had had no training and knew nothing of the mechanism of the locomotive.

Even in plumbing we demand experienced men who by examination have shown their competency to do their work properly.

What a hue and cry would be raised if incompetent and unlicensed men were permitted to make up prescriptions in drug stores. Why should the practice of medicine be an exception? Should we not remonstrate against ignorant men and women attempting to cure diseases of which they know nothing?

Should they be permitted to tinker with the human body without any knowledge of its structure or of its functions?

The proposition to permit every ignoramus to meddle with the human body is not a whit more absurd than to permit any one who knows nothing about navigation to pilot an ocean greyhound from one continent to another.

The human body is a much more complex organism than the finest ocean liner and it more often requires more brains and ingenuity to steer a diseased body back to health than it does to steer a steamer across the ocean.

We thus see of what great important medical practice laws are for the protection of the public.

Scientific physicians are in favor of medical legislation purely from altruistic motives. That this statement is true is apparent to any unprejudiced mind who has had access to the truth in the matter.

The medical profession is working unceasingly for the prevention and cure of disease. Its members have expended untold labor and thought in discovering and perfecting measures and methods for the prevention of disease and to mitigate the severity and limit the spread of infectious and contagious diseases. Obviously that has not been done, nor is being done for selfish purposes of financial gain.

We demand medical practice laws not for the mercenary motive to augment the emoluments of our professional services, nor to protect ourselves against competition, but solely for the protection of the lives and health of the people against ignorant and incompetent pretenders.

At every session of our State Legislature it becomes necessary to oppose the passage of proposed laws, which if put on the statute books would be inimical to the public health. These proposed laws are initiated and fostered by the members of the various cults and isms. What they desire to bring about is a license to treat the various diseases and ailments of mankind without acquiring the requisite preliminary knowledge and training. The members of some of these cults expend much time and money in an effort to induce our state legislators to give them the privilege to inflict themselves on an unsuspecting public without the necessary knowledge of anatomy, physiology, chemistry, bacteriology, physics, pathology, surgery, obstetrics, gynecology, neurology, internal medicine, etc., to obtain the degree of M. D.

What is the use of spending precious time, money and gray matter in mastering the curriculum in a medical college when all you need to do is to append some cultist nomenclature to your cognomen and you are privileged to treat

*Address of President Madison County Medical Society, June 10, 1927.

all of the various and sundry ailments of mankind.

Should not everyone have this privilege in this so-called free country? And should not the public have the privilege of choosing whomever they wish to treat their infirmities?

No, the dear public is not competent to choose between the erudite medical adviser and the ignorant, blatant pretender.

In matters medical public opinion is worthless. Disease processes are entirely too complex to be understood by the average intellect without special knowledge and training.

Not only is the public incompetent to decide what is best in medical matters, but it is an untrustworthy judge of its foods. The rascalities that were perpetrated upon a long suffering public prior to the passage of the Pure Food and Drug Law by the aid of disinfectants and deodorants is known in detail only to the unscrupulous food purveyors.

It is in the interest of the public health and the general welfare that Pure Food and Drug Laws and Medical Practice Laws are enacted. If these laws were abolished the country would be over run with ignorant, blatant quacks, and impure foods and drugs would be sold indiscriminately.

In a Utopia laws of this kind may not be necessary, but at the present stage of our civilization we need strong, rigid laws regarding the manufacture and sale of foods and drugs and the practice of medicine and surgery.

Notwithstanding these obvious truths, some of the cults are actively and perniciously engaged in an effort to nullify the laws regulating the practice of medicine in so far as these laws apply to their particular and peculiar methods of treating diseases.

The medical profession has no objection to the treatment of certain functional ailments or pathological conditions by the aid of massage or manipulation or suggestion. But what it demands is that those who profess to treat diseases in this manner shall have the necessary knowledge of the human body and its diseases, unless these methods of treatment are under the supervision of those who have this requisite knowledge.

Anyone who has no knowledge of the diagnosis of disease is not competent to decide when to treat abnormal conditions by these methods and when not to do so.

I have personal knowledge of cases, in which hip joint disease, caries of the spine and acute arthritis were zealously manipulated and maltreated under the fallacious and proposterous theory that these diseases were caused by subluxated vertebrae or pinched nerves somewhere along the vertebral column. Only harm and in some cases irreparable harm can result from this inexcusable ignorance.

There is another cult which maintains that medical practice laws are an abomination and that medical science is all wrong. This cult masquerades under the guise of a religion and claims that disease is a figment of the imagination and can be cured by a jumbled up prayer. This sect attempts to elevate its insanities upon a religious pedestal and then absurdly contends that medical practice laws interfere with religious freedom.

To find a parallel to this ancient superstition one must go back to the Zulu witch-doctor and the witch-doctors of the Australian aborigines. That is back to the lowest level of human culture. The intensity of this belief at the level of the Zulu or of the Australian aborigines shows that it was the general belief of the human race a hundred thousand years ago.

All over the world and all through history this primitive superstition still lingers.

This psychological rubbish belongs to the chaos and darkness of the Middle Ages when the learning of man was all but barren of practical results; when the mind of man was preoccupied with trifles of theology and weird and fantastic speculations about an unknown and unknowable future. During this dark period the world dwelt in ignorance, superstition and poverty and the mind of man was not impressed with the simple viewpoint of utility.

The superstition of the Dark Ages under a new version still lingers among certain modern cults and they attempt to cure disease with a zeal worthy of medieval fanatics, by methods which amount to substantially the same thing as that of the Australian aborigines, although they do not bedeck their healers in paint and feathers but in Prince Alberts and bedside manners.

There is no truth in any of these cults beyond the truth of suggestion. Whatever good there may be in this method of healing has been practiced by the medical profession since the time of Hypocrates.

But would it not be a crime to depend solely on suggestion in treating an acute suppurating appendix, or a diphtheritic membrane in the larynx or any other pathologic condition running a rapidly fatal course unless combated by scientific methods?

Should so-called healers be permitted to "treat" all manner of diseases whose conception as to their causes is on a level with that of the Zulu witch-doctor?

During the childhood of the human race these methods of treating disease were well-nigh universal, but with the development of civilization men began to use common sense and these primitive beliefs no longer received credence among the more scientifically minded. Disease was too important to be left to the incantations of the witch-doctors. Gradually common sense took the higher form which we call science and medical men gradually succeeded the witch-doctors.

At last in this wonderful age in which we are living science entered upon its real development, and the art of curing disease made just as much progress as any other practical art of modern times. We do not oppose these unscientific and ineffectual methods of treating disease because we are selfish and intolerant but purely from the altruistic motive of protecting the public from the harm which may ensue therefrom.

We are tolerant enough to admit everyone who is sincerely desirous of practicing scientific medicine by equipping himself with the necessary knowledge and training. The medical profession is not bigoted and intolerant. We investigate and analyze all plausible statements regardless from what source they come.

Heterodox opinions are now given space in nearly all of our journals.

This attitude has been a potent factor in the rapid advance scientific medicine has made in modern times.

Let us remember that all the accessory aids which are required for the progress of medicine such as the chemical, physiological and bacteriological laboratories, x-ray, microscope, etc., and the physical instruments of precision are in the hands of the regular medical profession and not in the hands of the quacks and cults.

Let us further remember that every discovery of any importance of the causes of disease, its diagnosis and treatment has come from the hands of the regular medical profession or those directly connected with it.

We may enumerate a few, such as asepsis, antisepsis, general and local anesthesia, x-ray, heliotherapy, hydrotherapy, the antitoxins of diphtheria and scarlet fever and the more recent erysipelas antitoxin, the discovery of the various bacilli and the role they play in the causation and transmission of diseases.

The discovery of the mode of transmission of yellow fever and malaria alone is worth billions of dollars to the human race.

The isolation of the hormones from the internal glands, the isolation of the vitamines and the discovery of their functions in the physical economy.

In short, every discovery of importance in the etiology, diagnosis and treatment of disease either medical or surgical has come from the hands of the regular medical profession or those closely associated with it.

It is, therefore, important in the interest of the public health that the practice of medicine shall be limited to those who have fitted themselves and are qualified to apply these discoveries in a scientific manner.

The faith healer, the absent treatment faker, or the spine puncher may believe he can cure you of acute appendicitis, gastric ulcer, renal and cystic calculi, or any other pathologic process, because of his lack of knowledge of anatomy, physiology and pathology. But the unfortunate patient suffering with an acute malady which may terminate fatally is not getting a square deal.

He trustingly places himself under the care of one of these pretenders, but the pathologic process with which he is afflicted goes on and on, possibly to a fatal end. Whereas, if he had come under the care of one who was versed in medical science the pathology might have been removed by surgical measures or corrected by scientific medical treatment.

From the foregoing it is obvious that laws regulating the practice of medicine are indispensable for the protection of the public health.

CHICAGO NOT A BREEDER OF CRIME*

Chicago's Crime Problem Is Largely the Problem of the Surrounding Country
A Few Kind Words For Chicago

Richard J. Finnegan
Co-Editor of the Chicago Daily Journal.
CHICAGO

There is no more important topic than that of Chicago to the editors of the states of Illinois, Wisconsin, Michigan, Ohio, Indiana, Minnesota, Iowa, Missouri and the Dakotas. Nature gave us the same home and is gradually making us into the same family.

It is an old story that Chicago is the geographic center of the great central lowland, the world's greatest combined agricultural and manufacturing basin, between the Rockies and the Appalachians, with the Mississippi drainage system to the west and the great lakes and St. Lawrence system to the east of the continental divide that passes through the western part of our city and its suburbs. Your states and ours are endowed by nature in a peculiarly munificent manner. Through trade routes of rail, water, highway and air, traffic east and west, north and south, in these states within 500 miles of Chicago a population of 50,000,000 centers here. Chicago just had to be. For as many centuries as the surface of the earth in the states from which you come remains as it is, you and Chicago will grow or wither together. We depend on you and you on us.

Now, although there is this natural affinity between Chicago and its surrounding states, it is not true that Chicago is thoroughly understood or the problems of its 3,000,000 people appreciated by its neighbors, such as you, except in isolated cases. I say thoroughly understood because even Chicagoans do not thoroughly understand their city. There are many things about Chicago to criticize and condemn as there are about the cities from which you come. You understand your city better than we do. We are trying to understand Chicago better than you do. Chicago receives perhaps more adverse publicity and editorial comment than any other city in America. One thing is true: Chicago newspapers do not sweep Chicago's municipal dirt under the bed or hide it under the living room carpet. Several years ago I happened to make a trip to a certain section of Illinois and on my journey discovered that there was a large territory, including a city of considerable size, partly under water from flood. No news of this flood had been printed in Chicago. There was only one newspaper in the city to which I refer and when the editor of that paper was asked why he had not sent out a story of the high water, he said that he did not want to injure his city.

Chicago papers, of course, take no such view. If anything, they overstate the ravages of the elements and the misdeeds of man, and because we are on every trunk line of wire communication, with all the press associations represented in this city, a very fortunate location brings us much unfortunate publicity.

Are you prone to over-emphasis Chicago's murders and other crimes, its crooked politics and bad government, its selfishness, its vice and iniquities, its slums, its hoboland, its valley beer gangs, its Ciceronian neighbors? Do you, through editorials and headlines, give your readers the impression that Chicago is a Moloch among the cities in which human sacrifice is the first law, where gunmen lurk at the entrances to our railroad stations, where murder is a misdemeanor and not a capital crime; the juggernaut of all the communities of this land, crushing down the innocent and the helpless, a place where only those escape and prosper who make selfishness and graft their protecting gods?

Chicago is not self-satisfied and is contending against the agencies that bring her into disrepute. And while she is thus engaged, in all fairness, her critics should first understand Chicago, which none of them do. To give an understanding of Chicago is a larger task than I could accomplish. The short time will let us consider only briefly just two or three things that may help us to a better attitude toward Chicago's problems.

There is no more popular subject for editorial writers than Chicago's crime. They call the city a breeder of crime. You may have a more sympathetic tolerance of judgment when you learn that Chicago's crime problem is largely your own crime problem.

It has been the decree of nature that Chicago should have things—some good and bad—heaped upon her from all around. In a geologic sense, Chicago has been the battleground of the elements. First one and then another glacial in-

*An address delivered before the Inland Daily Press Association at its meeting in Chicago, May 24, 1927.

vader rolled this way, tearing up the landscape. Our last visitor of this sort, the Wisconsin field 25,000 years ago, brought down loads of foreign substance from Wisconsin, Canada and other points north, and as it retreated left a Lake Chicago, 60 feet higher than the present Lake Michigan, extending over the ground we are now occupying as far west as LaGrange and Riverside and emptying into the Desplaines, Illinois and Mississippi rivers. As the ice crept back north, Lake Chicago dumped into Lake Michigan and the water began to flow eastward to the St. Lawrence. And the world was ready for man to come and build Chicago.

Now the glaciation of sand and gravel and other moraine is finished, but the process of human invasion from all around has been going on a hundred years. The scientist can examine the nearby outcropping and underlying rocks and from their grooves and scratches tell us just what occurred in those far off times. Some time in the near future, scientists will examine the underlying rock of our human makeup in Chicago and by the grooves and scratches on our civilization, by the kind of sand that they find in our population, in our penitentiaries, our jails, our insane asylums, and our poor houses, they will give us helpful data on crime and other subjects that now concern us not as much as they should.

We can at least examine the surface, and what do we find? That the native Chicagoan is not the chief culprit at whom our editorial critics aim their shafts; nor is the most troublesome resident, as many suppose, our so-called alien born citizen.

Not at all. The person who causes most of our troubles and community heartaches, who goes more often than any other resident to our penitentiaries for murder and other major crimes, who becomes a charge as an insane person, as a hospital dependent or as an inmate in our poor house, comes to us, my brethren, from your home town. He is the native born American from the farm just outside your city, from the crossroads that you passed just after you took the train to come to this meeting. He is the boy who ran away before he went through your grade school, or perhaps he graduated from your high school and outgrew the old home town and came to the big city to make his mark.

Just as the glacial deposits from outside gave Chicago its physical makeup, the human deposits brought here from round about by the impelling forces of adventure, unrest and nomadism help give Chicago its social aspect. Just as the retreating glacier turned the flow of Lake Chicago from the west to the east, making it necessary for us to dig our drainage canal to reverse nature's final verdict to protect our water supply, giving us physical problems for our skyscrapers, our coming subways and other great works, so the new and present population glacier has created tremendous problems for social engineering, which are not only ours but yours as well.

Let us examine Chicago's population. The census gives us roundly 3,000,000. There are 1,300,000 who were born here—native Chicagoans; 800,000 who were born in the United States outside of Chicago, and 900,000 who were born in foreign countries.

Psychiatrists tell us that their examination of the American soldiers in the world war indicated that more than 45 per cent of them had the average intelligence of 12-year-old children. Scientists maintain that this average runs through the general population.

If that is so, there are 1,350,000 persons of this group in Chicago. Those who were born here have the benefit and restraining influence of home ties and the associations of their childhood, which are very potent in keeping people out of trouble. When you consider, however, that from foreign countries there are in Chicago approximately 415,000 persons of this 12-year-old intelligence; and from the rest of Illinois and other American states approximately 360,000, making roundly three-quarters of a million who are largely without home influences, you will begin to appreciate why our prison records show that most of the crime is committed by outsiders, who generally come to the city in early life; and you will also readily understand why 75 per cent of the inmates of our penitentiaries are persons of 30 years of age or younger.

Just consider what would happen in your community or any other city if you were suddenly confronted with the problem of employing, directing, restraining, conserving the activities of three-quarters of a million persons of the average intelligence of 12, thrown upon their own resources.

Let's take the facts shown by the executions for murder in Cook county for ten years. Of 36

men who were hanged, 10 were born in Chicago, 10 in foreign countries—9 from Italy alone—and 16 in other states of the nation. Native born Chicagoans make up about 44 per cent of our population. Yet only 28 per cent of those hanged were born here. Foreign born residents make up about 29 per cent of the city's population. Their record is 28 per cent of those hanged. Americans born in other cities and states constitute about 26 per cent of our population. Yet they appear among the murderers hanged around 45 per cent.

You may say, perhaps, that if Chicago would show less partiality and hang enough of its own rascal native sons, murders would be fewer here, but there are other records to prove that this average percentage of delinquency runs pretty generally through the groups that make up our community. For instance, at Joliet (from records compiled for the purpose of this paper by Hinton G. Clabaugh) of 61 murderers in prison from Chicago only 5 were born in Chicago, 2 in Russia and one in Mexico, 2 in Italy and the remainder in states outside of Illinois. Twenty lived a greater portion of their lives in Chicago. Only 4 had previous crminal records and 57 were first offenders. Of 30 men serving terms in Joliet for manslaughter, only 4 were born in Chicago, 6 in foreign countries and 20, or two-thirds of the total, in outside states.

We all print a lot about Chicago bandits in our papers. Of 20 bandits guilty of robberies with guns, picked at random in the state penitentiary, only 5 were born in Chicago, one in a foreign country and 14 in states like yours. An analysis of the origin of 404 prisoners sent to Joliet and Pontiac from this city shows that 100 were born here, or a little more than 27 per cent of the total; 213, or 53 per cent, came from other states of the Union, and 81, or about 20 per cent, from abroad.

Carrying it out on a percentage basis of population of the different groups, three murders or other major crimes are committed by non-Chicago born American citizens to one committed by a native born Chicagoan. The non-Chicago born American commits nearly two murders or other major crimes for one committed by a Chicagoan of foreign birth. The records I have just quoted are gathered among persons actually convicted of crime.

In our county jail, where prisoners are kept before they are tried, the records show that 70 per cent of the alleged law violations here are committed by persons born outside of the city; 46 per cent by American born and 24 per cent by foreign born, leaving 30 per cent committed by native Chicagoans. Of the states represented in the Inland Press association, the two that show the highest percentage of crime to their relative population in this city, are Minnesota, first, and Michigan, second.

Nor is the record on crime all that will interest you. Sickness, insanity and pauperism as public charges afflict those who came to Chicago from outside in greater proportion than native born Chicagoans. In 1925 there were 2,489 deaths from tuberculosis in the city. Of this 891 were born in Chicago; 901 in the United States outside of Chicago, and 859 in foreign countries, both the latter showing percentages far too high. The county hospital, maintained at public expense, is the largest hospital in the world. Last year 40,592 patients were treated there. Thirteen per cent of these were of foreign birth and 87 per cent were native Americans. Of the native Americans there was only one Chicago born to every five born outside the city. At the Cook county poor house there are 3,682 paupers supported by tax payers. Only 250 of these are native Chicagoans, or about 7 percent. The non-Chicago native American homeless number 1737, or about 46 per cent, the alien born, 1720, or 46 percent. The states represented by the membership of the Inland Press association have 579 paupers there, more than twice the number of native Chicagoans. New York has 195. It might interest some of our New York critics to know that, considered on a basis of population per capita, a New Yorker in this city runs 20 chances of being a public charge in our poor house to one of a native Chicagoan.

Considered on the percentage basis of population, the boys and girls who come to this city from your home towns are growing insane more than twice as fast as those who are born in Chicago. Figures prepared at the state department of public welfare show that 39 out of every 100,000 native born Chicagoans are sent to our state insane asylums. The rate among those born in other states who come to this city is 97 per 100,000. The rate among foreign born is 115 per

100,000. Out of 2,193 insane persons from this county in our state institutions, only 526 were born here.

At the University of Illinois a few weeks ago—on "Mothers' Day"—President Kinley reminded mothers and fathers that they should not look to the university to make the characters of their sons and daughters, but that character forming was a function of the home. Many parents expect the university to change their children and reshape the fundamental structure that is set before the university age. We may say the same of the city. It can't take the youth or the man from your town or city and make a new person of him. In most instances you have made the matrix and cast the plate of his character before he gets to Chicago. If he is not set in the right type at home, while still in your charge, in ideals of respect for moral or statutory law, in ambition to work and become a citizen worthy of his American inheritance, in a desire to conserve his health and his mind by right living and right thinking, and in habits of thrift, so that he may not die in the poor house, you can understand, with us, how he may drift into misfortune and crime and make his adopted city the object of editorial brick bats.

He is Chicago's greatest crime problem—the youth who comes to the city all alone with no restraints, without or within himself, to check his desire to "step on the gas" when he lets loose on the highway of life.

But there is a brighter side to the picture. If your contribution to Chicago's criminal element comes from homes and communities where early training has been neglected, there are other efficient and successful American homes in your states and other states which send to Chicago its most illustrious citizens. Thus we are able to prove that it is not the city that ruins those who go wrong any more than it is the city that raises up those whose names make Chicago known around the world in art, science, literature, the professions and in business. The opportunities for evil or good, for degradation or fame, are here in equal measure, but the choice is up to the manhood of the chooser, not up to the city.

A study of the names of 1,544 men and women who live in Chicago and nearby suburbs, which are printed in Who's Who in America, shows that only 173 were native born Chicagoans, 210 were foreign born and 1,151 were American born outside the city. On the basis of relative population, youths who come to Chicago from other states have eleven times as many chances of being so successful as to get into Who's Who as boys born in the city itself, and even those born abroad lead our own native born. Of course, the Who's Whoers have advanced more in age and life's experiences than those who have broken into prison, and there is a chance that some of the youngsters who are now in the penitentiary may break into Who's Who when they get out and start upon their careers of reformation, but it would be interesting to take a group of the Who's Whoers and compare their original home surroundings with the same number of jail birds.

Now on the record of crime in this city, native born Chicagoans seem to stand fairly well, although in our Who's Who test they are not so good. But we can console ourselves with the knowledge that boys and girls born in Chicago go to other cities and achieve fame worth a few lines in Who's Who, and as for our native born criminals, we know they abound in other cities, too. In this connection, an Indiana man in one of our murder cases hit the point. With two women, also from Indiana, he conspired in the murder of another man in this city. After the killing, one of the women suggested that this Hoosier accomplice kidnap a Chicago taxi driver and kill him, putting both victims in the cab under circumstances that would indicate that the deaths were due to an accident. But the wise Hoosier refused. "Why?" asked the woman. "Because," answered the Hoosier, "the taxi driver might be a man from my own home town." That expresses Chicago's attitude pretty well.

While New York and other cities send us news of banditry and murder, our newspapers do not unloose a flood of abuse of the city involved. Perhaps we appreciate that the gunmen might be from our own home town. It might not be a bad idea when newspapers print stories of crime to determine the origin of the criminal, and if he is from Philadelphia or Chicago or South Bend or Danville, put at the end of the story "Philadelphia papers please copy," or "Danville papers please copy."

Chicago's problems of sickness, insanity, delinquency and crime have put Chicago on its mettle. Why, we have even gone so far as to elect most of our judges in our criminal and other courts from among men who were born in

your home towns! That's a pretty good start in enlisting your aid in helping Chicago solve its crime problem. If you have any objection to the way our municipal politics is run, just remember, please, that nearly half the city council of our city was born outside its boundaries.

Hereafter when Chicago appears to you as a wanton of crime, try to believe she also has a soul and that soul is always striving for the betterment not only of Chicago but of mankind the world over. To tell about the soul of Chicago would require time and ability not at my command, but remember just this one item: In a single year Chicago, by taxation and gifts, contributes nearly $53,000,000 to charity, or more than $17 per capita. For charity alone we tax ourselves $5 per capita more than the state of New York receives from its citizens to run their state government..

There is a tendency in the outside press to criticize the foreign born elements in the large cities, particularly as to their supposed criminal tendencies, which are represented as a bar to their thorough Americanization. I have shown you that there is not so much crime proportionately among the foreign born as there is among native born. If you could study the Americanization work being done in Chicago among the foreign born by leaders of the national groups themselves, you would be amazed. When you write on that question again, please remember that not only in Chicago but in Gary, Ind., and other centers of foreign born population, during the world war, in the liberty loan and other war drives, their quotas were generally oversubscribed before some communities with 100 per cent American born populations were fairly starting.

Not only at home did this group show their patriotism, but by the honors which they won on the field of battle, representatives of our foreign born groups were among the outstanding heroes of the war. Among these was Sgt. Jake Allex, who ranks not far from Alvin York in the list of Americans cited for bravery. He was a volunteer. After he returned from France he was called upon to speak at a dinner at which there were many notables, including two major generals. He said: "I left Serbia as a boy to be free in America. I came to Chicago. I went to school and worked at the stock yards. When America needed me, I joined the army. I fought the best I could. I came back and went to work. If America needs me again, I am ready. I only wish my mother in Serbia could be here, the only land in the world where a sergeant can sit down at the same table with two major generals."

Jake Allex is an example of what Chicago is trying to make of all her citizens.

There are other important matters affecting the outside press and Chicago which could be extensively discussed—for one, our use of Lake Michigan water, which some of your states are trying to restrict; for another, Chicago's already unconstitutionally restricted representation in our state legislature, which you from downstate are trying to make permanent. As with crime, there are two sides to each of these questions also and Chicago ought to receive your fair consideration of her position.

Here is a city growing at the rate of 70,000 a year—an increase equal to the population of Racine; not ideal, not boastful, welcoming just criticism, not resentful of calumny; tremendously busy with the greatest problems of American life; safeguarding the health of her citizens as no other American city is doing; with schools that make it the greatest center of learning on this continent; with a per capita church-going population as large as any city; with quiet, self-sacrificing men and women in laboratories doing more to safeguard the human race from disease now regarded as incurable than any other group in the world; a city whose distinguished citizens—your donation to us—give Europe economic equilibrium after the world's greatest war, build a capital for Australia, construct for Tokio the only buildings to withstand the ravages of the earthquake, or tackle and accomplish any other big job the world may offer; a city risen out of the marsh, which is reconstructing itself according to the spirit and vision of the World's Fair period, with unmatched boulevards, parks, playgrounds and forest preserves, art and scientific museums, libraries, hospitals and other institutions that bespeak the noblest aspirations; a city whose purse is sending a million dollars to flood sufferers—about 10 per cent of the national quota; a city with weaknesses but with a conscience that is alive to its shortcomings and with a will to meet the problems of today and tomorrow with renewed resolve that in the end the best shall come to the top in our great melting pot.

A city of many Main streets; a city of your

own flesh and blood, which your very best united with our very best will some day make into the world's greatest city; which your very worst united with our very worst sometimes injures but cannot destroy.

We implore you to consider and understand Chicago as she is and hopes to be—a city of noblest opportunity—your city as well as ours.

TIME

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There are a few still alive—though their silence would seem to indicate that their number is no longer large—who must be able to recall those happy moments of a younger existence when the only train which passed through Wauseon Centre left on one time, if it rolled East, and on a different one, if it rolled West, while the onlooker if he got self-conscious at all lived by City time, also known as Sun time or God's time. 1870 or thereabouts marks a point in the history of our so-called civilization where the concepts time and distance began to mean something even to the peasantry and traveling salesmen to say nothing of trainmen, telegraphers and individuals using the mails. The cowboy who used to drive his cattle from Keith County to Omaha needed to adjust his timepiece but very few minutes as he made his daily stations. But when the railroad came and he rode a caboose instead of a horse, these fractions grew. If he rode a passenger train, he might miss a connection by an hour or two, and when he telegraphed it became necessary for him to visualize the receipt of his message by a man clad either in a night shirt or a clawhammer coat.

The obvious disadvantages to a world in movement of a time system which varied with the religious tastes of every community were met by the adoption, the world over, of Standard time. While originally proposed in the late 'seventies and formally accepted by the Washington Meridian Conference in 1884, its advantages were so many that the railroads adopted the International Standard Time even before this date. Since the acceptance of Standard time the hard driven human race has felt itself free of at least one type of body louse. Until lately the New Yorker knew pretty well what his San Francisco friend was doing at any given moment and vice versa. If he telegraphed or, later, telephoned at noon he could count on the probability that the San Franciscan was in his office, or turned about, the San Franciscan knew that his three o'clock quotation on the new Burbank cross between spinach and poison ivy would hardly prove interesting to the New Yorker at dinner.

Such ease of living became abhorrent, it would seem, to those to whom the darker half of every day is synonymous with sin and to whom virtue seems existent only in preternaturally early mornings with their headaches, and the refreshing spectacle of men at work early, especially other men. I can find no other justification for the euphoric thought of Daylight Saving and its consequence, that once again every man makes his own time.

The honor of having invented the new insanity is today being contested for by various nations, various peoples and various lodges. The wrangle comes a bit late for any fundamentalist may quote the following from Isaiah 38, 8:

"Behold, I will bring again the shadow of the degrees which is gone down in the sundial of Ahaz, ten degrees backward."

The modern period of self-hypnosis undoubtedly began in the United States and must be credited to B. Franklin of Philadelphia. The fact must be charged to the debit side of his career and comes, presumably, out of those years when, if the War Savings Stamps department of the United States Post Office may be trusted for its knowledge of history, the honorable Benjamin invented "Thrift." His argument was simple—saving daylight saved candles. Without insisting upon the rights of the candle maker in the matter, Franklin's early Rotarian disputation may be best disposed of by citing what Wu Ting Fang once gave as the Chinese equivalent of "Penny-wise, pound-foolish." "The frugal man retires early to save candles—and begets twins."

It would seem an obviously simple matter for those preferring sunrises to firelight readings from our best authors—say The Saturday Evening Post, The Ladies' Home Journal, The Literary Digest, The Poultryman's Review and The Machine Tool Analyst—to get up an hour earlier; but no such common sense seems ever to be in fifty-one per cent. of the population.

If breakfast formerly was at six and the midday meal at twelve, the animal's habit is not changed by choosing to eat, respectively, at five and eleven. But our country cousins, no doubt because ashamed of their early lust for food, prefer to change this difficult element resident in their physiological mechanisms by going on Daylight Saving time. When this is not sufficient, they give further aid to the situation by declaring, through gerrymander, that their pigsties and mortician equipment factories are situated in the time belt of a more eastern sector. Thus they are enabled to sugar their evening salads as early as three in the afternoon, International Standard time. Our city giants, keen to unload more horse shoe nails and tin cans upon an already overstocked market, preach the gospel of daylight and efficiency to their millhands forgetting that the free hours guaranteed their subjects for gardening are chiefly consumed in the stale air of a movie house where Gloria Swanson makes every man a Bolshevik.

The sense and common sense of Standard time requires no defense so far as I know in any circle which embraces any of the following: railroad men, tramps, bank presidents, burglars, traffic cops, shipping clerks, itinerant gospel preachers, bootleggers and sheriffs, automobilists, mail men, brokers, newspaper men, telephone and telegraph operators, radio fans, nearly anybody who can either read or write, nearly everybody who has to be anywhere on time, dairy cattle and all jack rabbits during the open season. Why these forces have not long ago done away with the nonsense that monkeys with Standard time mystifies me, but, in the absence of any protesting voice from them, I wish to justify the murder of any sunbeamer by emphasizing what his worship of the golden orb means to the one-night actors who, like myself, play the lesser American provinces.

Suppose a spring assignment takes us into central New York. We know from the folder when the Limited will land us at Prospect Junction to spread our great white light before the afternoon meeting of the Business Women's Dramatic Association. Somewhat triumphantly our train arrives on time and an hour before the meeting opens. We rest quietly while a couple of lesser stars perform and at four go into action ourselves. An hour goes that way, another half into discussion, there are adieus and we are hurried to the six o'clock train for a seven o'clock banquet at Hinckley. The train trip takes half an hour, the taxi ten minutes, a hurried wash five, and you walk proudly into the banquet hall. Instead of applause, frigidity greets you. You are an hour late! For this is Hinckley, June first, and Hinckley today went on Daylight Saving time.

One lesson is enough. You speak to the students at Syracuse at nine tomorrow, and this time you will not be late. The night train rolls in at five, you wash until six, and enjoy a leisurely breakfast until seven and saunter to the University. Eight by your watch, you learned last night, is nine in these regions. Forehanded, you arrive at 7:30 Standard time to find the University halls not even open. A janitor lets you into a lecture room full of dust and you wait a half hour. And then you wait another whole one, for this is June second and Syracuse does not go on Daylight Saving until June fifteenth. You can, in this way, have the gods alternately laugh at you and cry for you as you play Utica, Herkimer, Little Falls, Schenectady, Troy and Albany. The whole distance is not three hours by railroad or autobus or automobile, yet, in that happy realm, you will work on schedules which are Standard time or Daylight Saving time or either or both, variously going into action each for itself and none for anybody else, on April twenty-fifth, May sixteenth, May thirtieth, June first or June fifteenth. Can one predict the future from the past? Certainly! It is only necessary to remember that when you play these empire cities in the autumn they return to normalcy on September twenty-fifth, September eleventh, September sixth, August thirty-first and September twelfth.

Instead of moving over the hours for meals, the go-getters of our larger industrial mudholes do not hesitate to move over a whole time meridian. Cleveland moved its to where it thought God ought to have placed it several years ago. Normally on Central time but weary apparently of what she felt an insult to the "sixth City," she fed herself the poppy of Eastern time. In the old days one could leave Erie or Pittsburgh, set his watch back an hour and feel himself quiet for whatever time he spent in the Western Reserve. For two years after Cleveland got these

measles, this quiet had to give place to a brisk awakening as one rolled into the eastern stretches of that city, or to an effort at quieting one's nerves as one left it. Now Cleveland's disease has spread, and like it or not, all the Londons, Ravennas, Gileads and Genevas of the classically-minded northeastern Ohio now lie sick with the big fellow.

In the northern boroughs of Ohio, Eastern time now reaches to Toledo. With this fact in mind, with some knowledge of geography and with a handy use of interpolation one might think that peaceful travel there was once more possible. But this Eastern time follows only certain rail lines. Meet your Toledo engagement over one railroad and you will be on time; meet it over another and you will have an hour before you in which to see the sights.

Between Cincinnati and Columbus the varieties of time are as infinite as the brands of bootleg liquor. The towns alternate in offering one Eastern or Western time as suits the Honorable, the Council of Bush County. In summer, Daylight Saving is added, the beginning and end of summer being determined by astrology, thus yielding a twilight zone which varies from one to six weeks.

On a day when you spend a week, say in Chipmunk Centre, you buy yourself a ticket for the evening show. You are south of Toledo, west of Columbus and north of Cincinnati. By trigonometry, the law of chance, faith in your watch, a furtive look at the charm you carry in your right waistcoat pocket and with a ten per cent. allowance for error in all human calculations, you figure out that the show begins at 8:15 your way of thinking. To make sure, you ask the girl.

"8:15" is the relieving answer.

"8:15, Cincinnati time?" you inquire.

"No, I said 8:15 this time."

"Do you run on Eastern Standard time?"

"No, we run on Daylight Saving time."

"Then 8:15 your time is 7:15 Cincinnati time?"

"I don't know anything about your time."

"Well, Cincinnati is on Eastern time and your town is east of Toledo and you said that you were on Daylight Saving time."

"I told you that we went on fast time."

"By fast time do you mean Daylight Saving time?"

"I don't know Mister, I just know that we are on fast time."

"Does that mean that you are one hour ahead of Eastern time?"

"No, Mister, we are on Standard time."

"What kind of Standard time?" you ask.

"Standard Western time."

"Oh!" and you start again. "Normally you are on Western Standard time, that's one hour slower than Cincinnati time. Now you are operating on Daylight Saving time, so your time is the same as mine because we have not yet started Summer time. Is that right?"

"Say, Mister, there's people waiting for tickets, would you mind stepping out of the line?"

Within the last few weeks some one has started the subscription list which is to build a lasting monument to the Englishman who invented Daylight Saving time. I am not able to recall his name but the monument ought to be built, and I enter my subscription herewith—one brick.

SYPHILIS AND CHRONIC AILMENTS, WITH A NEW TEST FOR THE DIAGNOSIS OF SYPHILIS

FERDINAND HERB, M. D.
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There is no disease in the whole realm of medicine that is so fascinating in its study as is syphilis; there is none that is so protean in its clinical manifestations; and there is none that requires for its adequate treatment an equally broad and extensive knowledge of the vast domain of morbid changes to which human flesh is heir. The time-honored correlation of syphilology as a branch of dermatology has grown entirely out of date. It is a relic of those still recent days when syphilis posed as a skin disease and little was known of its fatal onslaught upon every organ of the body. Even today, but a small fraction of all the misery, the suffering and despondency that is caused by syphilis is placed at the door where it belongs. Multitudes of chronically ailing patients go on through life as hopeless cripples, eking out a miserable existence, unable to compete with their fellow citizens for want of physical fitness and deprived of their heritage of happiness and enjoyment of life for

the only reason that physicians have not, as yet, learned to see the hidden syphilis that underlies their chronic ailments. Nevertheless, sufficient data have been brought to light to enable us to make a more efficient diagnosis and to relieve, or cure, a large percentage of these chronic sufferers if we would but use the knowledge we possess intelligently and employ it without undue bias or harmful prejudice.

Incidence of Syphilis. A solid and broad foundation for the recognition of syphilis disguised in the form of chronic ailments has been laid down by A. S. Warthin,[1] of Ann Arbor, Mich., in his noticeable article: The New Pathology of Syphilis. Though published as early as 1918, the perusal of medical literature shows the deplorable fact that but few, apparently, have read it and still fewer have profited by it. The most startling finding, revealed in this article, is the incidence of syphilis as prevalent in the Northern regions of our country. Three hundred out of the seven hundred and fifty cases coming to autopsy at the university hospital of Ann Arbor during a period of ten years, from 1908 to 1918, revealed the presence of this disease, that is, 40% of the total number. These figures are the more astounding as "the clinical material of this hospital is drawn chiefly from the rural population of the state, representing the better elements of the middle class farmers, village store keepers, mechanics and laborers." In the years from 1914 to 1918 the percentage of syphilitics was even higher, due probably to more experienced work, and averaged year after year from 40 to 50%. Surprising as these figures may be, let us remember that they represent not someone's personal opinion or guess but concrete data gleaned from Nature's own irrefutable and indisputable records, as revealed at the autopsy table. They must, therefore, be accepted at their face value without deduction and without mutilation of any kind.

As to the reliability of the reading of these records of Nature there can be no question. Not only are the lesions of syphilis, as shown later, specific and so characteristic that a well informed and experienced pathologist can hardly be mistaken, but Warthin searched for, and found, the specific syphilitic organisms, the treponemata, in a sufficient number and variety of instances to satisfy himself and, I think, any reasonable critic as to the correctness of his interpretations.

As the average percentage of syphilitics among the rural population is usually estimated at from 2 to 4 per cent., the facts revealed by Warthin show the incidence of syphilis in these country districts to be ten to twenty times as high as it is generally understood. In large cities, the percentage of syphilitics is, of course, higher. If we take for them, as, for instance, for Chicago, the upper values found in the country, namely, 50% of the total population, as the average, it should be a conservative and constructive estimate. It is conservative because the percentage is probably higher. It is constructive because real benefit can be obtained from such valuable work as Warthin's only if we try in our diagnosis at the office and the sick bed to come up to the findings of the pathologist. Ultra-conservatism and cynicism are not wanted. They are destructive. The wide gap between the supposed 10 to 15% and the existing 40 to 50% of syphilitics must be bridged in our clinical work if we would but do our duty to our patients and give them the help they demand and which we are able to furnish if we utilize to the full the knowledge at our disposal at the present time.

Diagnostic Difficulties. How woefully we have failed so far in recognizing syphilis in its aberrant forms may be taken from Warthin's statement that syphilitic lesions were found "in the great majority of autopsies in the bodies of those who gave no history of syphilis and no clinical signs or symptoms interpreted by clinicians as indicating syphilis." In other words, syphilis was not even suspected in the great majority of syphilitics who came to autopsy. It was only after death that the true character of their ailments was recognized.

This shocking truth shows clearly how inadequately our present conception of syphilis fits the existing facts. By looking for specific symptoms we totally ignore those disguised manifestations of syphilis which range through the long line of chronic ailments all the way from simple chronic catarrhal conditions of the nose and throat to the gravest afflictions of the inner organs. It is only in a few instances, for instance, in diseases of the aortic arch, that the specific nature of chronic ailments is recognized today, and this only very recently.

The fact that an existing syphilis is so readily

disguised and overlooked as to be unsuspected in a great majority of those infected and dying apparently from other ailments is most significant. Though it may be true that the beginning of syphilis in adults, and especially in women, not infrequently passes unnoticed—the social life in country districts absolutely precludes the assumption that in Warthin's cases syphilis, except in a small percentage, was acquired during the concious life of these individuals. We are, therefore, forced to the inevitable conclusion that the bulk of our syphilitics is "innocent of guilt" and acquired their infection as a sinister gift from their fathers and mothers before entering upon their tainted worldly existence. They are, so to speak, "damaged goods," smitten harshly by a cruel fate and marked for life; unfortunates, predestined to suffer because, as the Bible says, "the sins of the fathers shall be visited upon their children."

With the acceptance of the conclusion that most cases of syphilis are congenital a great many difficulties in the diagnosis of hidden syphilis vanish. It explains, first of all, the absence of a history of infection. We must admit, however, that congenital syphilis becomes occasionally conspicuous at an early age by exhibiting symptoms known to be specific, such as snuffles or skin eruptions. The diagnosis is then, of course, readily made. This, however, is not the case if the symptoms are non-specific. It is surprising when taking the early history how many chronic sufferers know of difficulties in their first years of life. They were weak as babies, took nourishment badly, cried much and did not seem to do well. Such "Lebensschwaesche," as the Germans aptly call it, is always due to syphilis. In many instances chronic digestive troubles prevail and persist in spite of skillful treatment. Their syphilitic nature is rarely recognized. French authors, principally, have called attention to these facts and advised to search for syphilis if babies, for any cause, do not thrive. Their advice is here repeated, and with emphasis. No one should mind a negative Wassermann reaction. It is usually negative in these cases though syphilis exists. Nor should anyone mind the social standing of the parents. Syphilis shows no respect for pedigrees nor for church affiliations. The diagnostic test will clear the diagnosis and the proper antisyphilitic treatment frequently scores successes in these cases that surpass all expectations.

Our difficulties increase if morbid symptoms, specific or nonspecific, are entirely absent and no signs of any kind indicate the existence of the infection. In such instances the baby may, and frequently does, look strong and healthy and may go on through childhood and adolescence, or even further, without much serious consequences. Chronic ailments developing under such circumstances upon a syphilitic basis are hard to diagnose and, if diagnosed perchance, are most always blamed to an infection contracted by the patient. There is, however, no need for such an assumption. It is but a few years ago that the opinion still prevailed that congenitally infected syphilitics could not pass the age of thirty. But this opinion is rapidly waning. We know today that the congenitally syphilitic may not only pass the age of thirty and enjoy a reasonable health, but that he may live even to a ripe old age without ever being suspected of his congenital disease. I know a family of five children, all alive and all over 60 years of age. Of the three I have examined all present unmistakable stigmata of congenital syphilis and all react promptly upon specific remedies when given for their seemingly non-specific ailments. Similar instances have been reported in literature.

Nor need a woman suffering from syphilis be devoid of fruitfulness. Though frequent abortions may, and do, point to syphilis, large families of apparently healthy children do not prove its absence. It is a great, and frequently disastrous, mistake to exclude syphilis offhand under such conditions.

Above all, however, outward appearances should never influence the decision of the examining physician. Though syphilitics frequently show the severity of their ailment, there are innumerable cases in which a robust physique, a rosy complexion and a seemingly splendid health effectively hide the underlying syphilis. No observing physician of experience has failed to meet examples of this kind. Warthin mentions one which tragically demonstrates the serious consequences of medical mistakes made in this direction. To a young couple, apparently in the pink of health, was born a dead child whose tissues swarmed with treponemata. Warthin adds that the diagnosis of syphilis was not accepted

clinically and the mother permitted to become pregnant again with the same result.

In confirmation of the above given new views on chronic syphilis the following histories taken from a family of syphilitics that is at present under my observation will be of interest. Mrs. M. B., 26 years old, was first seen when suffering from a severe attack of acute rheumatism involving nearly every joint of her body. On account of her utter helplessness the complete examination was deferred several weeks, when a total absence of patellar reflexes, Argyll-Robertson pupils and a slight Romberg were disclosed. The patient is 5 feet 7 inches tall, weighs 211 pounds and is the oldest of a family of nine children. She had a miscarriage one year after the birth of her 5 years old boy. There are no subjective symptoms and the patient enjoys now a seemingly perfect health. Later on a younger sister, 19 years old, the fifth of the children, sought advice on account of a slight enlargement of the thyroid, existing since her tenth year. The routine examination revealed here, besides some minor symptoms, the patellar reflex much diminished on the left side and almost absent on the right side, Argyll-Robertson pupils and a strongly positive Romberg. She swayed so much that she almost fell. Her height is 5 feet 8 inches, her weight 160 pounds and her physical development excellent. She is unmarried and arrived in Chicago only a short while ago from the farm where she spent her whole life. Questioned if there were any aches or pains, she replied: No, I am feeling fine. Upon further inquiry as to the condition of health of the other members of the family, it was learned that father and mother are living on the farm, which they cleared themselves, and are feeling well. The mother is 48 years old and has black hair without a streak of gray. She had one miscarriage between the eighth and ninth child, which she blames to the hard lifting while clearing land. All the children are of large, bulky physique. I saw a visiting brother who is 6 feet and 2 inches tall, a truly herculean figure.

This syphilitic family, thus, explodes all that is being taught, and is generally accepted, as to the influence of syphilis upon the progeny. It shows how grave a mistake it is to be influenced in one's diagnosis by a large number of children or by their favorable outward appearance, as the largest and healthiest looking families are not necessarily free from a syphilitic taint.

REASONS FOR THESE DIAGNOSTIC DIFFICULTIES

A flood of light is thrown upon the hidden connection between syphilis and seemingly non-specific chronic ailments by a casual observation of Warthin's, who noticed treponemata embedded, for instance, in the muscles of the heart, without the slightest reaction on the part of the surrounding tissues. This observation may, perhaps, at first glance seem of slight significance. Upon due consideration, however, a vast amount of information in regard to our subject may be deducted from it. Above all, it furnishes the explanation for the existence of those numberless cases of asymptomatic syphilis that have always puzzled clinicians by demonstrating to our eyes that specific toxins are not produced by living, growing microbes, as it is generally taught. If they were, tissue reaction would never be absent in the presence of treponemata and such microscopic findings, as referred to above, would be impossible. Symptoms of more or less severity would be present in all instances. Clinically we know that this is not the case. The truth is that specific toxins represent poisonous split products which originate during the disintegration of killed organisms. Abundant proof has been furnished in one of my former papers[2] to substantiate this statement and no opposition has been voiced by anyone since that time. Syphilitic symptoms, therefore, do not appear until treponemata die and specific toxins develop from their disintegrating bodies in sufficient quantities.

Herein lies the secret of asymptomatic syphilis. If the rate at which the specific organisms die, or are killed by the host, is slow, comparatively few specific toxins are produced, though large numbers of treponemata may be present. Irritation and destruction of the tissues of the host are insignificant, so that symptoms are slight or practically absent. This is the case in countless instances of congenital syphilis[1] and in those numerous instances of the acquired form that have reached the late, asymptomatic stages. In these cases, the virulence of the parasite has been reduced to such a low level that a complete equilibrium has been reached between the aggressiveness of the invaders and the defensive forces of the host. As long as this equilibrium is maintained, the progress of syphilis is slow

and is usually unnoticed by the patient. Years, or decades, may thus roll by. The syphilitic infant may grow up to adolescence, and even far beyond, without ever knowing of his condition.

If, however, the equilibrium is destroyed, the progress of syphilis becomes more rapid. Should, for instance, for any reason the resisting power of the host be lowered, as it may happen during physical or mental stress or on account of unfavorable conditions of environment or nutrition —the specific organisms become aggressive. They grow in numbers and disseminate more freely, especially at places favorable to their existence. With increased numbers of microbes there is increased dying, particularly if the tissues of the host answer with a general or localized reaction. Increased quantities of specific toxins are now produced. Irritation and tissue destruction follow in proportion. Chronic ailments of all descriptions are the consequence. They are more conspicuous or dangerous the greater the extent of the destruction or the more vital the organ is that is damaged. Physicians may, and frequently do, think of syphilis when diagnosing these chronic cases. If the patient admits infection and his Wassermann is positive, the chances for adequate treatment are good. But if his case is of the congenital form and he knows nothing of a previous infection, or if his Wassermann is negative, as, unfortunately, is the case in the vast majority of chronic ailments—all considerations of syphilis are usually dismissed with the inevitable consequence that the correct diagnosis is missed and the patient is doomed to needless ailing.

The mystery as to the syphilitic character of chronic ailments is increased if the onset of the trouble is initiated by one of the many febrile diseases. In this instance, it is the host who disturbs the equilibrium and becomes aggressive. It is a well known fact that during fever the defensive forces of the body increase their activity. As the battle that ensues to subdue the new infection waxes fiercer under the stimulus of the higher temperature, the previously settled treponemata are attacked with equal force. The efficacy of a number of successful therapeutic measures is based upon this biological phenomenon. The effect is the same as in all other instances where massive destruction of treponemata occurs: increased production of specific toxins and its consequence, as described above. The diagnostic difficulties, however, are here multiplied for the simple reason that the previous febrile disease naturally suggests itself as the cause of the ensuing chronic ailment. Assuming, thus, that symptoms of heart disease arise after an attack of influenza in consequence of the increased destruction of treponemata, that are always present in the muscles of this organ in every older case of syphilis—the assumption may be natural that they are due to the organisms of influenza, but in reality syphilis should be blamed.

A similar difficulty as to diagnosis exists in those numerous instances in which specific chronic ailments follow trauma. Though the modus operandi in bringing about these lesions is entirely different in these cases, as shown elsewhere,[3] trauma, too, offers such a plausible reason for the existing ailment that a possible syphilitic etiology is mostly ignored. And yet, many of these lesions are distinctly syphilitic and could readily be cured by a properly instituted antisyphilitic treatment. Only those comparatively few cases are diagnosed correctly in which the development of gummata leaves but little room for doubt as to the syphilitic nature of the lesion.

The chronic syphilitic lesions produced under such circumstances are not confined to any one organ of the body. We are wont to point a warning finger to the afflictions of the central nervous system as the awful consequences of insufficient or maldirected treatment. It is certainly not my intention to underestimate these most unfortunate complications, but they are far less important when contrasted with the many distressing and even fatal syphilitic involvements of the inner organs. The overwhelming evidence furnished by his autopsies convinced Warthin that "the majority of cases of syphilis die from the results of these slow mild, inflammatory processes in the viscera and blood vessels rather than from paresis or tabes" and further that "I am convinced that the majority of all cases infected with syphilis die of chronic myocarditis." These are impressive facts that should be noted by physicians and should carefully be considered when planning the treatment of their chronically ailing patients. From a business standpoint it is of highest interest to all life and accident insurance companies to take cognizance of these same facts. Syphilitics are "damaged goods." They are "increased risks," whose

chances for health or life vary according to the syphilitic involvement of their inner organs.

A NEW TEST FOR THE DIAGNOSIS OF CHRONIC SYPHILIS

Progress in the diagnosis of syphilis, if disguised as chronic ailments, would, of necessity, be slow and tedious were it not for the fact that there exists a simple diagnostic test which gives us the means to prove the presence of syphilis wherever it exists in these chronic cases. This test is microscopic. Its scientific basis has been given in two previous papers.[4, 5] It rests upon the well known fact that the body substance of the treponema, the specific organism of syphilis, is of fatlike, or lipoidal, nature. Fat or fatlike substances, however, can be digested parenterally only by those cells of the host that are able to elaborate fat splitting, or lipolytic, ferments. To these cells belong preeminently the lymphocytes and their derivatives, the plasma cells[4]. These two kinds of cells are, therefore, called into action by Nature in her battle against micro-organisms containing fat or fatlike substances, for instance, in her battle against the treponema and the tubercle bacillus. It is for this reason that the cellular infiltration at the site of syphilitic or tubercular lesions consists of lymphocytes and plasma cells. It is true that these specific cells may also be found at the lesions of a few other infections, for instance, in leprosis and anthrax, as their specific organisms also contain lipoids, but these diseases are so infrequent that under ordinary circumstances their consideration can safely be dismissed. We are, therefore, fully justified to consider a lesion with a cellular infiltration composed of lymphocytes and plasma cells as either tubercular or syphilitic. But in cases where also tuberculosis can be excluded, be it clinically or microscopically, as it is possible in almost every instance, a cellular infiltration composed of lymphocytes and plasma cells denotes syphilis and is of the very same diagnostic value as is a four plus Wassermann reaction.

In old and chronic syphilitic lesions the cellular infiltration is composed almost entirely of lymphocytes and plasma cells, mostly with an addition of fibroblasts. The meaning of these latter cells has been given elsewhere[4]. They are of no moment from a diagnostic standpoint and deserve, therefore, no further mention. In the case of subacute lesions, however, during exacerbations or before the chronic stage has been reached, there will be found a more or less conspicuous sprinkling of polymorphonuclear leucocytes among the lymphocytes and plasma cells. The polymorphonuclears possess no lipolytic, but only proteolytic, ferments and are at the lesion to digest and remove the debris of the tissues of the host that have been killed during the acute stages of the process. If much tissue has been destroyed and much must be removed, it may even happen that the number of polymorphonuclears is so great as to obscure the presence of the lymphocytes and make the diagnosis of syphilis rather uncertain. However, as the acute symptoms abate, such difficulties as may exist in this regard vanish, as the polymorphonuclears act quicker and leave the field to the less speedy lymphocytes in the same proportion as the tissue debris have been removed. In chronic ailments, therefore, any bit of the diseased tissue, may it be gained by excision or during operation or at autopsy, will enable us to diagnose syphilis if the cellular infiltration is composed principally of lymphocytes and plasma cells and tuberculosis can be excluded.

Because of the lymphocytic nature of the cellular infiltration at the site of syphilitic or tubercular lesions it is but natural that also the discharges issuing from such lesions are of lymphocytic character. Thus, we find the cellular elements made up of lymphocytes in syphilitic spinal fluids, in syphilitic and tubercular pleural exudations and in syphilitic and tubercular sputa. This characteristic feature, that is, the more or less conspicuous predominance of lymphocytes over polymorphonuclear leucocytes in exudations and discharges, has never been used for the diagnosis of syphilis, but has great potentialities when properly studied, provided the same limitations are applied that have been mentioned above. Super-infections of the various types may here, however, obscure the characteristic picture in the same, or even a higher, degree by a profusion of polymorphonuclears as does the destruction of the host's tissue in the microscopic test. This is true especially if the discharges come from places where super-infections frequently exist, as in the nose and throat. Discharges from running ears or fistulas of the various kinds do not so readily offer this diagnostic difficulty. In the case of the lungs, a lymphocytic sputum with

a persistent absence of T. B. points to syphilis.

To find out just what the percentage of lymphocytes must be to clinch the diagnosis of syphilis in a given case must be left to those who specialize in the respective field, as the material necessary for observations is only in their hands.

Comment. The connetcion between syphilis and chronic ailments has been indicated clearly by Warthin in his commendable work on the pathology of syphilis. His statement that "the proportion of syphilitics in our ailing class is very high" is undoubtedly correct, as it is in this "ailing class" principally that the syphilitics are hiding who make up the difference between the assumed 10 to 15 per cent. and the existing 50 per cent. afflicted with this ailment. Just how high this percentage is we are unable to tell until the results from the application of the test given above begin to be published on a larger scale. However, full information as to the presence of syphilis and full benefit to our patients are not obtainable unless the test is made wherever the necessary bit of tissue is obtainable, no matter whether it comes from the nose, the throat, a chronically inflamed appendix, an ulcer of the stomach, a gall bladder, an ovary, a Fallopian tube or from any other pathologic organ. As no organ is exempt from this infection, no chronically diseased organ should be above suspicion. Thus, the routine employment of the test gives surgeons and specialists an unusual opportunity to benefit their patients by checking up their diagnosis and avoiding errors, while, incidentally, contributing to a better knowledge of syphilis. In a still higher degree the pathologist is benefited. At autopsy, the diagnosis of syphilis is possible in 100 per cent. of the cases without the laborious and time-consuming investigations as made by Warthin.

For the sake of justice, however, it is necessary to approach a subject of such great importance as the relation of syphilis to chronic ailments with a fair openmindedness and a willingness to be convinced, if facts warrant it. Nothing is gained by that deplorable spirit of ultraconservatism that rejects, as shown above, the diagnosis of syphilis even in a dead born child full of treponemata. It is that same inexcusable, blighting spirit that prompts antitoxinists to send, without a qualm of conscience, annually 10,000 diphtheritic American children to an untimely, preventable death rather than to accede to the request, made time and time again, for an official investigation of their unspeakably silly, murderous antitoxin theory. If the same destructive policy of silence that is so effectively used to kill those children is applied also in this instance, hundreds of thousands of chronically ailing people must continue to suffer for sheer lack of a proper diagnosis. It is the general practitioner who gets their cases. Unless he is better informed by a free discussion of these matters, progress can not be accomplished and the great lessons resulting from such splendid work as Warthin's must continue to go unheeded in the same way as before to the greatest detriment of the ailing human race.

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PREVENTIVE MEDICINE IN NERVOUS AND MENTAL DISEASES*

Outlining a Method of Approach, Case History Reports and Results Obtained

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Along with our efforts as physicians to cure disease processes, we have integrated at even a higher level in directing our energies and scientific training towards the prevention of these processes.

What has been done in the work for the prevention of tuberculosis, some of us are trying to do in the field of nervous and mental diseases.

If you wish to study individuals, it is necessary to go where you can first come in contact with large groups and, secondly, where you can have more or less control over them. The start of investigation along these lines in schools was first made in a few universities, and we found out that at this age a great many unhealthy mental conditions were in full development. If we could only begin at an earlier age we might be able to obtain better results. With this in view, a little over a year ago, I went to Culver

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Military Academy, which, as you all know, is a preparatory school, to study the situation.

If we look at the psychoses and neuroses for a few minutes from a symptomatic viewpoint, what do we see? There is one symptom that we find in common; that is the inability of the individual to face facts as they are. This symptom varies from mild conditions of anxiety to severe stages of absolute regression, wherein the patient is merely a vegetating mass. This one symptom is comparable to the rise in temperature which we find in all of our infectious disease conditions, or to the convulsive seizure which we find in the epilepsies. It is not many years ago that we diagosed a case of epilepsy mainly because one had convulsive seizures. Then we found out that there was a definite disease of the central nervous system caused by the spirochete and that one of the symptoms in common with the epilepsies was the presence of convulsive seizures. We then found other symptoms that went with these seizures until now we have completely separated general paresis from the epilepsies. Another group that has been taken away are endocrinolepsies. I think the same thing will happen to the psychcoses and neuroses.

For purpose of study I arbitrarily divide the human being into five units, realizing that all of these units must have an inter-relation or the whole individual could not function at his maximum capacity. Also keeping definitely in mind that the patient has the disease and not, that the disease has the patient.

Realizing that our oldest inheritance is a physical one, I began by studying the physical. As the race developed we integrated always at a higher level until we have reached present day man. After the physical, the next step up the scale is the chemical and at this level we study the various glands of internal secretion. At the next integration we study the nervous system. Here we have many things to study that can be taken by themselves, always keeping in mind that the physical and chemical units are inter-related with the nervous system. The next division, which is the fourth, is the psyche. This, I again divide into, first, intelligence, and second, emotions. Under intelligence we have those who are mentally defective and those who are not. Under the mental defectives, we have those who are academically defective and those who are defective in general education. Now that we have the individual divided into four units, he is of little value unless he can fit into society. A very important thing is how the individual functions in the place where he must live, because after all, we may all think as we wish, but we must act according to the well defined rules of society.

What are some of the things for which we search in the physical? One is the actual pathology that might be the cause of our psychoses and neuroses. De Lee and Crothers[1] say: "Babies can be and frequently are, seriously and even fatally injured even if the forces used in delivery are well within what are regarded as normal limits." In cases of asphyxia neonatorum, when the circulation is cut off and the baby is left inside the uterus for an indefinite period, damage is done quite frequently and we may not notice the effects of this for years afterwards. You are all more or less familiar with the work done by Sharp and McClaire[2] at the New York Polyclinic Hospital where they performed a lumbar puncture within from 12 to 48 hours after birth on 500 new-born babies, and found bloody and blood-tinged cerebrospinal fluid in 45 babies, that is 9%. Isn't it advisable to keep a rather close supervision on this 9%? There is also a small group of people with small aplastic hearts. We have a test which is a great help in diagnosing these cases. It is the neuro-circulatory test used during the war to eliminate men who were unfit to fly. After the war I applied this test[3] to a group of known psychotic cases at St. Elizabeth's Hospital and found that it indicated the hebephrenic and catatonic types of dementia praecox, while the manic depressive and paranoid dementia praecox had a different type of rating altogether. In giving the test the patient reclines for five minutes while his blood pressure and pulse rate are taken; he then stands and the blood pressure and pulse rate are again taken. He then goes through a standard exercise climbing up and down on a chair ten times in 15 seconds. The pulse rate is taken and the number of seconds it requires the pulse to return to normal is also noted. Eighteen points is the highest obtainable rating and it was found that those grading below 10 points or the ones having a low rating were in the hebephrenic and catatonic types of praecox. I then made a revision of this test so that it could be applied to school children between the ages of 10 and 15 years

and applied it to 100 children in the Junior High Schools of the District of Columbia and the test indicated a number of children having a low grading.[4] When the list was presented to the principal of the Junior High School, she stated that, if the physician had been there the entire year, he could not have selected a group of pupils who were giving them more concern. Upon examining these children, it was found that they had many neurotic symptoms. The test was then worked out on 100 feebleminded children[5] in the Walter Fernal School, Waverly, Mass., and it was found that the mental defective individual had a high rating, in fact, only two out of the 100 rated low. This test was next applied to the senior class at Culver Military Academy and six men had low ratings, out of 161. These men were examined and they all had very significant histories. I will give one of these cases later which will illustrate what I mean. The test has been performed on 250 plebes, ten of whom had low ratings. They are under careful supervision at present.

We also look for the various organic inferiorities and the obvious physical inferiorities such as hare-lip, etc., also infections.

What other evidence have we that there are some types of nervous and mental disease due to an extra-neural pathology? Lewis[6] found, in going over some 4,800 necropsies that 71.55% of the hebephrenic and catatonic types of dementia praecox had a small aplastic heart. The incomplete development involved also the capillary system. In the study of the weight of the heart in psychoses, 75.5% of the patients with dementia praecox had hearts of less than average weight, while only 7.8% of the patients with paranoid dementia praecox had hearts of less than average weight and 30% of the patients with manic depressive psychosis had hearts of less than average weight. Fulstow[7] recently reported on a large group of heart weights in the psychoses. She did not, however, take into consideration the size of the heart. While she did not find as high a percentage of hearts below average weight in the hebephrenic and catatonic type of dementia praecox as Lewis, nevertheless, the percentage was high enough to indicate that we should at least consider that there is a certain type of psychoses in which there is an extra-neural pathology.

C. H.—Is 18 years of age and according to tests has an IQ of 114, and up until his 16th year he was a very good student. From his 16th year up to the present, when this history was taken he was not passing his subjects. Along with this he was becoming careless, indifferent and rather untidy about his personal appearance. He graded 9 on the neuro-circulatory test. Family history was practically negative. He was the second in a family of two, having an older sister. No history of difficult labor, enuresis, or rumination. As far as could be ascertained the home environment was good, passed all of his grades in school regularly, no serious accident or illness of any kind. Always got along nicely at home and with his teachers in school. His report cards always stated he was neat and tidy about his work and eager to get ahead. Family had never had any cause to worry about him until after his 16th year, when his work indicated a falling off. Various instructors stated that he was indifferent. In some classes he was careless about his written work, in other classes they stated he was erratic about his oral work and as you go over his school records for the two years, you find a constant struggle between the boy, his parents, and instructors. On examination, we found a rather slender, dark complexioned, clean boy who laughed at the wrong time. He was passive and co-operative because it was the line of least resistance, he was sociable and deliberate. He had no well defined plans for the future except to go to college, but he didn't known how he was going to get there. At times would bite his finger nails and when questioned concerning this stated—"I guess I am nervous. When I am reading an exciting book I chew my finger nails." "If I have anything to do, I don't know, I just neglect it." Laughs when he tells this. Gives one the impression that there is no emotional depth. In talking to the boy one could get very little response, there was a lack of interest in everything, indoors or out, with the possible exception of tennis, but this was rather a superficial interest. When questioned concerning the future he said, "I'll just wait and something will turn up." The physical examination was practically negative, with the exception of the low rating on the neuro-circulatory test. He was also 12 pounds under-weight. Neurologically, there was nothing of importance with the exception of the reflexes which were only obtained upon reinforcement. His endocrinological examination was negative.

Summary and Recommendation. It is not necessary to draw very far on the imagination if one remembers the history of dementia praecox patients, especially the hebephrenic and catatonic types, who have a regressive mechanism, to recognize very similar symptoms in this case. Also keeping in mind that the neurocirculatory test was applied to 161 boys and out of the number only 6 indicated a low grade, which was the only reason for their being studied. The parents were then advised to take the boy, after he finished school, to a physician in their own community who was trained in psychiatry and neurology; to endeaver to get the boy interested in some type of work during his summer vacation and not to push him; whenever the boy showed any initiative to encourage him in this, also, if

at the end of the summer, he showed any inclination to go to university to assist him in making his plans but for the father not to make all of the plans. It was pointed out to the father that the important thing to do was to get this boy trained in something he was capable of doing, even though it were a mediocre position. The father could plainly see that there had been a marked change in the boy's personality and this had been taking place during the past two years. Up until this time, the boy had been active in his studies, the various school activities, and in athletics, but now he was more or less indifferent toward everything. What impressed the father most was that the boy made no complaint, but was very passive.

The other five case histories were somewhat similar to this and time and space do not permit me to give case histories of other types of physical defects that are responsible for the psychoses.

The next level of investigation is the chemical which includes the glands of internal secretion.

It is necessary only briefly to mention the cases of hypo-thyroid and hyper-thyroid cases as we all are more or less familiar with them. I will give a case history of a glandular condition in which all of the symptoms, at least the ones that were getting the patient into difficulties, are manifested at the social level.

S. H.—Is an over-developed boy of 15 with an I. Q. of 109, who had always passed every grade, but because of his behavior had been expelled from several schools. The things he did were not of a vicious nature. To illustrate, in the last school which the boy attended it was the custom when an individual had 200 demerits in the entire year he would be dropped from the school. This boy received 173 demerits within one month and before the school year was over he had received 1,000 demerits. He would throw food in the mess hall, would talk back when spoken to, was late at formations, in fact, was in difficulty all of the time. His instructors liked him and would spend many hours talking to him. He would promise them to do better and within the next 24 hours would be in difficulty again.

Family History. He was the older in a family of two, was a premature baby, long and difficult labor, and had various diseases of childhood. When he was 6 years of age his father was serving as an officer in the Army and the boy lived with his grandparents. They, of course, were over-indulgent with him. The mother states—"As far back as I can remember, I was always afraid to call at the school, because they had something to tell me about S." They had been using bribes to get the boy to do things for many years. On examination, the boy was co-operative, answered questions willingly and asked many intelligent questions concerning his physical examination, was interested in this but in general was rather childish in his reaction. He stated—"I always pass my subjects. I don't think that anyone who has to work very hard is intelligent." At this time the school authorities were on the point of dismissing the boy. It seemed as if everyone had exhausted their patience in talking with the youngster concerning his various escapades. Finally, the Superintendent sent for the boy and spent about an hour talking with him. The youngster promised him that he would do better. Within the next week the boy had jumped in the swimming pool with all of his clothing on, and of course, after this the school authorities and the parents had practically given up all hopes.

Physical Examination. The boy was 5 ft. 11 in. tall and weighed 175 pounds, and was 15 years of age. Complained of growing pains occasionally, in the night; otherwise, the physical examination was negative. His neuro-circulatory test rated 15 points. His neurological examination was practically negative. His endocrinological examination showed the following: History of an uncle being over 6 ft. 2 in. tall and of an aunt having goiter. The boy had a slight maxillary torus, broad pelvis, slight hyper-extension of the joints, and the fluoroscope indicated a slight thymic shadow. His skin was soft and pink, teeth in general were slow to develop, very little hair development on his body, in fact it was silky and downy in appearance. The pubic hair was masculine in development, the breasts were well developed and there was a mottling of the skin. No laboratory tests were made. Diagnosis of persistent thymus was made.

Recommendations and Treatment. The boy's reclining pulse was 52 and standing pulse 78. The boy was given one drop of sodium iodide once a day. His pulse rate was taken each day after a two minute rest. The parents and the instructors were told to treat him more as a grown up boy and pay less attention to his childish tricks and arguments. To stop telling him that he must do better and to put him more on his own by placing responsibility on him, and to assume the attitude that he would shoulder the responsibility without talking to him about it and not argue with him. Also to stop bribing him when they wished to get him to do things. At the end of two months this boy's pulse rate went up over 84 and he commenced to lose some of his flesh. He took up boxing, his discipline grade became somewhat better, in fact he had not been on the report sheet for a period of two weeks, which was something that had not happened in the past several years. Of course, this was partially due to the fact that they were not placing him on the report sheet for so many trivial things as formerly; however, he was not actually getting into as much difficulty as he had before. This boy physically, appeared 17 years of age, mentally he was approximately 16 years of age, and, of course, all of his instructors, including his parents viewed him and his actions as a boy of this age. Now physiologically he was only about 8 or 9 years of age because of the persistence of the thymic gland which caused a dysfunctioning of all other glands, and consequently the boy acted like a kid. There was probably a hypo-thyroid secretion because of the low pulse rate and the sluggishness of his reactions at times, and a hyper-pituitary because of the length of his long bones. These secretions were evidently readjusted when the

sodium iodide was given. I have had several cases of this type.

The next level for study is that of the nervous system. As we do not have any of these conditions at the military school because of our physical requirements for entrance, I will only briefly mention in passing, some of the types that have mental symptoms; the juvenile paretics, hemephlegia cases with mental symptoms and the post or rather chronic encephalitis cases. It is necessary to approach the latter two from a re-educational standpoint. I will omit case histories in this group and will continue with the fourth level which is the psyche.

The first thing to investigate at this level is whether the individual has mental equipment sufficient to carry him through the things that he is attempting to do, or is it an emotional problem which is not permitting him the full use of his mental ability? In this examination, it is necessary to be very careful and not lay too much stress on academic intelligence because, quite frequently, you find individuals who are well founded in general education, who are quite keen in seeing and sensing situations, but are unable to pass academic subject. One can find the various intelligence tests very helpful, but they should be used in the same manner as are x-rays and Wassermanns; in other words, you will make many mistakes if you permit the laboratory to make your diagnoses. In the past year I have found many cases of boys with a high degree of intelligence, both academic and general, but they have been failing not only in their subjects, but in making an adjustment to the school environment, simply because they had so many emotional difficulties. I have found many cases of rather mediocre intelligence who were making very good grades and who were ranked high in the general activities of the school, that is, they were cadet officers and active in athletics. It soon becomes very obvious that it is not the amount of intellect we have, but rather it is the ability to understand ourselves and use the intellect which we have.

At this level I am trying to deal with a group who have, so far as I am able to ascertain, purely a psycho-pathology. I will give some case histories which will probably explain more thoroughly what I am trying to bring out. I will try to bring out the reason for abnormal behavior, that is, abnormal thoughts and actions and their causes as they are found in individuals through the study of psycho-pathology. There is not time nor space in this paper to take up the various concepts, such as Freud's[8] discovery that the wish is the dynamic factor in the personality, and Pawlow's on the conditioned reflex or the school of behaviorism, Kempf's[9] autonomic-affective cravings, and the various other analytical studies made by Bleuler, Jung, Jones, Ferenzi, Adler, White and Jelliffe. I would, however, for a moment like to point out the teaching of Adolf Meyer in which he states that "The psychiatrist, psychologist or physiologist must do more than think of the isolated phenomena which he happens to be interested in, such as the hallucinations, the content of consciousness or the physiological functions of a neurone or segment, if he wishes to understand the entire problem and see the phenomena as it occurs in its relationship to the personality or organism as a whole."

X—A well-developed, clean, alert boy age 17 years who has a rather high I. Q. of 120. He was in the third year of preparatory school and was having some difficulty with his studies. During vacation time he would drink heavily, would associate with bootleggers, sneak-thieves, and their families. During the last Christmas holidays he had assisted in breaking into a clothing store where they had stolen a great many suits and overcoats.

Family History. The boy was the first of a family of three, 10 hour labor, instruments were used. He was breast-fed for nine months, but they always had difficulty in feeding him. No history of enuresis or rumination. He walked and talked at approximately 14 months of age. Whooping cough at 7 years, chorea between 8 and 9 years, scarlet fever at the age of 12. Cried a great deal as a baby and began biting his finger nails at an early age. Upon examination the boy was found to be co-operative, alert, and capable of giving his history in an intelligent manner. In fact, he explained why he had made several visits to the office, merely for the purpose of studying the physician to see if he could tell him his history. He was taught at home until he reached the age of 7 years, was then put in a private school and got along very nicely. His mother used to keep him at home a great deal and talk to him. The father was drinking and the boy stated that the mother used to plead with him not to drink. She would talk to him by the hour concerning his father's drinking. This would make the boy very nervous. The father would insist that the boy come to the station to meet him evenings when he returned from the city, and the youngster used to resent this, because he stated that he knew his father had been drinking and would return home and abuse his mother and that there would be trouble. This state of affairs continued until the boy developed chorea between his 8th and 9th years, and was in bed for a period of several months. He evidently made a fairly good re-

covery, but the family condition continued up until his 12th or 13th year. Up until this time he had been a model boy as far as his mother was concerned. It was about this time that the father was examined by a physician and was informed that unless he took better care of himself he would die from kidney disease. The family moved away from this section of the country and the father gave up drinking altogether. This, of course, made a difference in the family condition and relationship. Now the boy was not as necessary to his mother as he had been formerly and he noticed this. When he was 14 years old he began to steal things from home and began to get into difficulties at school, would associate with the worst boys and girls in the school; then he began to drink and finally reached the point where the family could do nothing with him at all. The boy was very proud and liked to associate with nice people, and when questioned concerning his desire to associate with bootleggers, etc., he stated—"I don't know why I go with them because I do not like them. I don't like the way they live, I really want to associate with nice people, but somehow I find myself with them." "I don't like these people at all, I simply detest their type of life." He rated 15 on the neuro-circulatory test. The physical examination was negative, neurological and endocrinological examinations were also negative.

Summary and Recommendations. We have difficult labor, trouble with feeding, a little slow in walking and talking and we find that during his early period and age of childhood up until the age of 11 or 12, he was very close to his mother. He resented the quarrels which his father and mother had. He stood up for his mother during all this period even when his younger brother stood for his father. He always took the part of his mother. The mother took all of her energy out on this boy, when she became nervous, the child became excited, she talked to him continually concerning drinking and the bad effects of drinking. He said as a child he did not confide in his father. Then, the relationship between the father and the mother was taken up again in an entirely different manner. Naturally, the mother's attentions and affections were not as strong toward the boy as formerly after the family life was straightened out. The emotional outlet was then turned toward the husband and the boy was left more or less without the affections to which he had been accustomed. It was during this period that he commenced to be a little wild and take up drinking himself. Finally, he drank very heavily. It is not very difficult to observe that his father had won back his mother by stopping the drink habit, therefore, why not the boy? This reconstruction period of the father came at a very serious time of life for the boy, because during this age he is passing through his homosexual period and is even now attempting to make his heterosexual adjustment. This case fits very nicely into the Oedipus complex. Analysis was commenced on this boy over a year and a half ago. He is getting good grades now and will graduate from preparatory school this year. He did not drink nor steal anything during the last Christmas holiday and is very eager to go to college. The most important point, of course, is that he now listens to his father's advice and writes letters to him, something that he never did before.

The last division of this arbitrary arrangement is the social. The home is a big factor in our problem at the social level. Of course, you will realize that it is very difficult to state that the pathology exists definitely at the social level. An only child is a disease just the same as measles or mumps, also the oldest child and the youngest child usually when he comes late in life after the other children are well up in years, and, too, you find that the only boy among a family of girls or an only girl among a family of boys is usually a problem. Just as in measles and mumps, in some cases we have no complications, so do we find many of the above conditions without complications and the children recover very nicely. Children in homes can be spoiled just as easily by applying too much discipline as by not applying any. The emotional problems of the parents are quickly transferred to the children.

C. D.—A rather slender under-developed boy of 14 years with an I. Q. of 110, who entered school two years ago. He immediately resented all authority, talked back to his instructors, quarrelled with the other boys and consistently failed in his studies. Family history showed that he was an only child and that the father was a domineering type. He happened to be a big business man in his community so he was frequently spoken of as a man of "Iron-will." Now if he had been a man of no particular social standing, we would have probably called him a "brute." The mother always protected the lad, consequently there was a continual dispute over the boy, in front of the boy. It was a rather difficult labor, boy was bottle-fed walked and talked at an early age, had all of the diseases of childhood, was pampered by the mother and bossed by the father. The father would boast about the boy in company, telling how he was going to make a wonderful boxer out of him and a great athlete. The boy did not care anything at all about athletics with the exception of tennis. It had reached the point where the boy was afraid to play with anyone his own age or older than himself because he did not dare come home and say that he had been beaten, so consequently, he was always playing with younger boys. Upon examination, it was found he was a rather slender lad, who was evasive, irritable, and quick to anger. He finally told how on one occasion the father criticized him severely before a group of other boys his own age, in fact, he lectured the boy at length on his various faults. The boy was failing in his school work, was very low in his discipline and could not get along with anyone. In fact, he was an absolute failure in the school, academically and otherwise. On the physical examination he

was found to be 15 pounds under-weight, but otherwise, in good condition. The neuro-circulatory test, he graded 14. His neurological and endocrinological examinations were negative.

Summary and Recommendations. The situation was explained to the father. It was pointed out to him that because he himself never had the advantages that the boy had, he was trying to make this boy into an athlete and was domineering him too much The father was trying to absorb the boy's own individuality and, of course, the boy resented this. The military school probably was not the correct place for a boy of this type because he so resented authority and would immediately transfer his resentment from the father to the school authorities, especially from the disciplinary standpoint, so the father was advised to place him in another type of school away from home. This situation was also explained to the boy and the whole thing worked out in detail for him.

I hope that I have succeeded in making it clear to you what I mean by taking an individual as a whole unit. The interesting part is that in the application of this method of approach, it has produced practical results. I think that we will all agree that preventive medicine is always the best medicine.

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EYE INJURIES

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One of the most important branches of the entire field of surgery is the treatment of eye injuries. They occur in all walks of life and to old and young. Every physician is called upon to treat these injuries and he should be prepared to give some kind of proper first aid treatment.

Of these injuries the most common are those in which a foreign body is imbedded in the cornea. When they are not too deeply imbedded they can be readily removed by the aid of a magnifying glass and a foreign body spud. For this a plus 20.00 ds or a plus 24.00 ds lens, which has about a two inch focus, should be used. When the foreign body is deeply imbedded, or when there remains a small ring of stained tissue after the foreign body is removed the case should be referred to those who have had special training in this kind of work.

However the physician first called should give whatever relief he can and therefore I think is fully justified in removing at least a part of the foreign body providing this is done under the proper aseptic precautions. A foreign body on the cornea is exceedingly uncomfortable, often quite painful, and any relief you can give them will be much appreciated.

For the removal of these anesthesia is obtained by instilling into the eye a 1 per cent. solution of Holocaine—(a derivative of Phenacetine)—followed in five to ten minutes by one or more instillations of 2 to 4 per cent. cocaine in a 1/5000 adrenelin chloride solution. In some cases of marked irritation with profuse lachrymation it may be necessary to use an 8 or 10 per cent. cocain solution in order to obtain good anesthesia. It should be remembered that cocaine solutions soften the cornea which sometimes becomes denuded of its epithelium. To avoid this the patient is directed to keep the eye closed for five minutes after instilling the cocaine. Holocaine has the advantage of being somewhat antiseptic and does not soften the corneal epithelium. The foreign body spud preferred is one with a small lance shaped blade slightly curved on the flat and with the point rounded but sharp, resembling somewhat a flat scoop. With such a spud the foreign body can be lifted out with the least damage to the cornea. However, when the foreign body is hard, very small and deeply imbedded, it becomes necessary to use a cutting instrument. For this purpose an instrument is used which has a sharp angular blade set almost at a right angle to the handle. With this it is possible to cut in around and under the foreign body, thereby dislodging it from its bed. This instrument is especially useful where such a foreign body has entered the cornea at a very acute angle and penetrated Bowman's membrane. The danger then is that in attempting its removal it may be forced into the anterior chamber.

The instruments are sterilized by immersing

them in a 95 per cent. solution of phenol for five minutes or more and then in grain alcohol for 15 minutes. A Coddington lens, with a one inch focus and a magnifying power of 10 diameters is used in most cases. When the foreign body is exceedingly small, as for instance the pulverized sand which finds its way into the eyes of railroad employees after it has been ground under the wheels, a similar lens with a one-half inch focus and a magnifying power of 14 diameters is used. After the foreign body has been removed a few drops of a 20 per cent. solution of Argyrol, Silvol, Neo Silvol or Protargol, or better still a 2 per cent. solution of Mercuro chrom 220 should be introduced and the eye bandaged. Mercuro chrom has the advantage of discoloring the wound or any abrasion.

Foreign bodies imbedded in the conjunctiva are readily removed with a small tooth pick swab and usually require no further treatment. If they are deeply imbedded it is often necessary to hold the eye lids with a speculum and remove the foreign body with forceps and scissors.

In penetrating wounds of the eye it is important to ascertain how the injury occurred and the nature of the object which penetrated the eye. The wound is carefully inspected; its location and extent determined; loose shreds of tissue and any foreign substance removed after thoroughly cleansing and cocainizing. Prolapsed iris or other tissues are carefully removed with forceps and scissors. Any cuts in the sclera, or extensive cuts or lacerations of the conjunctiva and lids should be sutured. In suturing the eye lids it is of the utmost importance to properly approximate the cut ends of the free lid margin. The conjunctiva and the skin should be sutured separately. Extensive cuts in the cornea are best covered with a conjunctival flap.

Penetrating wounds of the eye are seldom, if ever, probed. The only injuries where probing might be justified are those caused by broken glass, for the reason that most kinds of glass would not be shown by the x-ray. Then too the information gained by probing an eye is usually of little value and much damage may be done, or infection carried from the surface of the wound to the interior of the eye. In all penetrating wounds of the eye where there is any possibility or probability of a foreign body remaining in the eye x-ray plates should be made by a thorough, competent roentgenologist. I wish to emphasize this point especially for the reason that in the past three years four cases have come to our attention in which the foreign body was overlooked in the first set of x-ray plates but plainly located in the plates made subsequently in another laboratory, and the particles of steel removed with an electro magnet. It is always safe to use atropine in an eye with a penetrating wound. The best magnet for this purpose is the giant electro magnet, for the reason that most of the particles can then be removed without introducing the tip of the magnet into the eye, thus avoiding the danger of infection as well as the necessity of making an incision into the globe.

The following is a brief summary of 1,122 injury cases taken from my records over a period of two years. These cases constitute all forms of injuries which one is called on to treat in an industrial community. A large majority of the cases came from the industries. The non-industrial, constituting only 8 per cent. of the total, are represented by children, pedestrians, and men and women from offices and homes engaged in their various duties.

Of the industrial group the largest number of injuries occurred among railroaders, there being 415, or 37 per cent. This group includes engineers, firemen, switchmen, brakemen, conductors, car repairers and all kinds of railroad laborers. The next in frequency is the steel group with 199, or 17.7 per cent. These include machinists, boiler makers, blacksmiths, ironworkers, and all those engaged in shop work. Then come laborers with 171 cases, or 15.2 per cent. After that coal miners with 77 cases, or 6.8 per cent. After this come tinners and sheet metal workers with 19 cases or 1.6 per cent.; electricians and carpenters each with 18 cases, or 1.6 per cent.; acetelyn welders with 10 cases, less than 1 per cent., and a few cases each of painters, plasterers, brick layers, glass workers, and those engaged in the manufacture of fireworks and other explosives.

As stated before the most common eye injuries are foreign bodies of the cornea. These constitute 68 per cent. The next in frequency are the foreign bodies of the conjunctiva of which there are about 10 per cent. Then come lacerations of the cornea, conjunctiva and eye lids, of which

there were 9 per cent. Following this in frequency are burns with hot metals, acids, caustics and electricity, about 5.7 per cent. Last in frequency are severe contusions and penetrating wounds, about 5 per cent. of the total number of injuries.

The entire series has been divided into two groups. *First Minor Injuries:* Those with foreign bodies imbedded in the coats of the eye; non-penetrating cuts and lacerations, and first and second degree burns; 1,073, or 95 per cent. of the cases, come in this group. In the second group, or *the Major Injuries* are classed all the more serious injuries, as penetrating wounds of the globe and orbit, extensive lacerations of the eye lids with an accompanying contusion of the eye ball, and third degree burns. These constitute only fifty cases, or 5 per cent. of the total.

We will now study these 50 major cases a little more in detail. Of these 50 cases 30 had penetrating wounds of the globe, of which 7 had a retained particle of steel which was removed with the electro magnet. X-ray plates were made in 20 cases, of which 9 were positive. In two of these cases the piece of metal was lodged in the socket outside of the eyeball, and allowed to remain. The fragments of steel removed from the interior of the eyes ranged from 1 x ½ x 1½ Mm. in diameter to 1 x 5 x 15 Mm. in diameter. The final results in these cases are disappointing.

Of the 50 major cases one had a dislocated lens; four eyes were enucleated; 5 developed a detached retina; 8 had third degree burns; 12 developed traumatic cataract; 12 iridectomies were done; 13 recovered with normal vision.

The occupation ranged as follows: 1 was engaged in housework, 1 car repairer, 1 blacksmith, 2 boiler makers, 2 coal miners, 2 iron workers, 5 railroad laborers, 4 carpenter laborers, 6 machinists, 6 pedestrians, and 7 laborers. 12 were children. Of the 12 children 7 had penetrating wounds and in 4 of these an iridectomy was done. 1 recovered with vision 5/120; 2 had traumatic cataract with vision 1. p.; 3 had 20/100 vision; 4 recovered with normal vision and 2 eyes became blind.

Not infrequently ulcers follow injuries or foreign bodies of the cornea. These require energetic treatment by one of three methods. First by instilling drops in the eye such as solutions of silver nitrate or the different salts of silver, mercuro chrom, or numoquin hydrochloride (Optochin). Optochin is supposed to be almost a specific for the pneumococcus, and mercuro chrom for the gonococcus. These are useful agents but do not always stop the progress of the ulcer. Then we resort to various cauterizing agents, such as phenol, tincture of iodine, and 10 per cent. silver nitrate. These are applied directly to the ulcer with a toothpick. The writer has obtained splendid results by applying to the ulcer a solution of phenol saturated with iodine crystals. The eye is thoroughly anesthetized with holocaine, cocaine and adrenalin. The patient is placed in a reclining or semireclining position and directed to fix the eye in a direction to bring the ulcer to the highest point on the globe. The ulcer is then swabbed clean with a tooth pick dipped in tincture of iodine, or if there is a dense necrotic mass in the ulcer this is removed with a foreign body spud. The ulcer pit is then filled with the saturated P. I. solution applied with a tooth pick and the eye lids held open for three to five minutes, after which it is flushed with boric acid solution, a drop of atropine and cocaine 1 per cent. in castor oil is instilled and the eye bandaged.

The best and most modern treatment of corneal ulcers is by the use of the electric thermophore as developed by Dr. Wm. E. Shahan of St. Louis. This instrument consists essentially of a metallic pencil or tip with a blunted end heated by an electric thermophore to a constant heat, the temperature being registered on a thermometer connected with the instrument. The tips are made in different sizes and interchangeable to correspond to the size of the ulcer. After thoroughly cocainizing the eye this heated tip is held in contact with the ulcer for 1½ minutes at a temperature of 140 degrees. It has been found that this is sufficient to kill the pneumococcus.

In about 90 per cent. of the cases the ulcer is "Stopped" by one application of the thermophore. In a few cases there will be a slight extension of the infection at one edge of the ulcer and a second application is necessary. The after treatment consists mostly in using atrophine sufficient for comfort and to keep the pupil well dilated. There is little or no pain during the application of the thermophore if the eye has

been thoroughly cocainized. Since the ulcer is usually stopped with one treatment, while it is still small, the resulting scars are smaller than in those cases where the ulcer attains a considerable size before it is stopped.

An application to the conjunctival sac of Butesin Picrate Eye Ointment 1% is of great value in all eye injuries.

Society Proceedings

ADAMS COUNTY

A regular monthly meeting of the Council was held at the Quincy Elks Club at noon, July 15, 1927. The following attended: Drs. Knox, Wells, McReynolds, M. Bitter, Center, Koch, Blomer, Cohen, Swanberg, Stevenson, and Mr. Charles E. Carley of the Associated Credit Bureau of Quincy as guest.

In the absence of the President, Dr. Center presided. Dr. T. B. Knox reported the meeting of the house of Delegates of the Illinois State Medical Society at Moline. The Secretary outlined the tentative plans for the big all-day meeting of the Society on November 14. Dr. Frank Cohen presented the following report of the Professional Collecting Committee and made a motion that it be accepted.

Mr. C. Carley, Secretary of the Associated Credit Bureau makes the following offer to the physicians of the Adams County Medical Society:

By becoming a member of the Associated Credit Bureau—dues $25.00 a year—a physician will have access to the information in the files by 'phone until 5:00 p. m. week-days. Will be supplied with lists of "no credits" which will be of assistance, especially after 5:00 p. m., and other times. Additions will be made to the files of interest to physicians especially as to non-payment to physicians.

If the number joining this movement be at least 30 the Bureau would undertake to make collections having a regular designated person for this task, for 25 per cent of collections.

The committee recommends: That the Adams County Medical Society should not as a society embrace the proposition of Mr. Carley, for the Associated Credit Bureau, but the Society should do everything in its power to make such a plan a success.

Furthermore, the committee recommends that the Council endorse the plan of Mr. Carley, and that it recommends him to interview the individual members of the Society with a view to carrying it out. Whether or not the plan will be carried into full effect will depend on the individual members.

Frank Cohen (Signed)
Aldo Germann (Signed)
Milton Bitter (Signed)

At this time Mr. Carley, Secretary of the Associated Credit Bureau was given the privilege of the floor and addressed the Council on the proposed collection system for the physicians of Quincy. Dr. Knox made a substitute motion that Mr. Carley submit in writing a more detailed plan of his proposed credit and collections to physicians, this to be submitted at the next meeting of the Council and published in the Bulletin. Seconded and carried. Dr. Stevenson gave a report of the picnic held in June.

The meeting adjourned at 1:30 p. m.

Harold Swanberg, M. D.
Secretary.

Marriages

Lawrence A. Dondanville, Moline, Ill., to Miss Eva Catherine Ender of Deerfield, June 15.

George E. Dudenbostel, Chicago, to Miss Nona Russell of Ashdown, Ark., June 28.

James Crescent Redington to Miss Evelyn Hansen, both of Galesburg, Ill., June 27.

Guy Watts Wagner to Miss Blanche E. Thomas, both of Chicago, June 4.

Personals

Dr. Herman L. Kretschmer has been elected a corresponding member of the Hungarian Urological Association.

Dr. and Mrs. John S. Allen, Keithsburg, celebrated their golden wedding anniversary June 21.

Dr. Fred M. F. Meixner, Peoria, has been appointed an examiner of aviators by the U. S. Department of Commerce.

Dr. Harry Olin, St. Louis, has been appointed radiologist to St. Elizabeth's Hospital, Danville, to succeed the late Dr. William H. Miner.

Dr. Dallas B. Phemister was elected president for the ensuing year of the Alumni Association of Rush Medical College of the University of Chicago, and Dr. Charles A. Parker, secretary.

An oil painting of the late Dr. William E. Schroeder, chief of staff of Wesley Memorial Hospital, was unveiled at memorial services at Wesley Hospital in June.

Dr. Clarence T. Roome has removed to Santa Barbara, Calif., it is reported, to engage in the practice of medicine. Dr. Roome was health commissioner of Evanston for about fifteen years.

Dr. Harry E. Mock, assistant professor of surgery, Northwestern University Medical School, was awarded the honorary degree of doctor of science at the ninety-third annual commercement of Franklin College, Franklin, Ind.

Dr. Maurice L. Blatt, associate professor of pediatrics, University of Illinois College of Medicine, Chicago, addressed the Rock Island County Medical Society, Moline, June 14, on "Infant Feeding."

Dr. Charles Davison, emeritus professor of surgery, University of Illinois College of Medicine, Chicago, gave the commencement address at the University of South Dakota, Vermilion, June 6, on "Prevention of Disease."

Dr. James G. Carr was elected president for the ensuing year of the Alumni Association of Northwestern University Medical School, and Dr. George K. Fenn, secretary-treasurer.

Dr. Edwin J. Kehoe, Dayton, Ohio, has assumed the duties of superintendent and medical director of the county tuberculosis sanatorium at Pontiac.

Dr. Earl B. Miller has resigned as medical director of the Elm Grove Sanatorium, Bushnell, effective July 31, to become medical director of Hillcrest, the Adams County Sanatorium.

Dr. Ralph H. Kuhns, of the Children's Memorial Hospital, Chicago, spoke at a meeting of the Medical Round Table of Chicago July 12 on the subject of "Nutritional Problems in the Diseases of Children."

News Notes

—A request from the Chicago Field Health Officers' Association to have the affiliation with the Chicago Medical Society changed to the present name of the organization, Chicago District Diagnosticians' Association, was disapproved at the June 14 meeting of the council of the Chicago Medical Society.

—The Illinois State Health Department was organized fifty years ago, July 1. During that period the life expectancy of the average child born in the state has increased at least fourteen years, according to the editor of *Illinois Health News*, and the expenditures for public health work in Illinois have increased from about $10,000 to $500,000 a year. Another great change in the half century has been the increase in heart disease, which now is ahead of tuberculosis in the mortality column, whereas fifty years ago it was fourth or fifth.

—The president of the board of directors of the Washington Park Hospital writes that the staff and the board of directors of that institution have undergone reorganization, and that the name will be changed to the Washington Park Community Hospital as soon as the necessary legal steps can be effected. Among the directors now are Prof. Anton J. Carlson, Ph. D., University of Chicago, and Dr. Arthur C. Klutgen; the other members of the board of directors are business men. Dr. Francis P. Hammond has been made president of the staff and chief of the surgical division, and Dr. Roy R. Jamieson, chairman of the medical section of the staff.

—Thirty-three unlicensed cultists of Chicago were fined in Judge Hamlin's municipal court, July 8, on charges of practicing without a license. Many of the cases had been pending since last October. Fourteen chiropractors were fined $500 each. Nineteen naprapaths received fines of $100 each.

—The recently elected officers of the Chicago Tuberculosis Society are Dr. Walter H. Watterson, president; Dr. Edwin B. Tuteur, vice-president, and Dr. Samuel A. Levinson, secretary-treasurer. There will be no meetings of the society until October.

—The Chicago Medical Society, since July 1, has connected its switch board with the Doctors' Private Wire Service, 208 West Washington Street. At the close of the day the society notifies this service to take the calls for nurses, and they are given a list of available graduate, undergraduate and practical nurses. Their secretaries are on duty at all hours, so that when a nurse is needed it is only necessary to phone in the usual way. This arrangement makes unnecessary the employment of evening and night attendants at the society's office.

—A new laboratory for diagnosis was opened in the Illinois Research Hospital Building, 1817 West Polk Street, July 18, under the direct supervision of the state health department. Dr. Lloyd Arnold, professor of bacteriology and preventive medicine, University of Illinois College of Medicine, will be in charge. The laboratory services, it is reported, will be free to physicians and other citizens of the state. Several rooms in the basement of the research hospital have been set aside for this work. There is a full-time staff of bacteriologists, serologists and chemists.

—Belroi in Gloucester County, Virginia, where Dr. Walter Reed, conqueror of yellow fever, was born, will be turned into a national shrine to

the distinguished surgeon by Virginia Medical Society, which recently began the work of rebuilding the structure.

—The twenty-ninth annual convention of the American Hospital Association will be held in Minneapolis, Minn., October 10-14, 1927. The exhibit of last year was exceeded in size by only the Automobile Show and the Railway Supply Manufacturers' Association exhibit held in conjunction with the American Railway Association —both of which are commercial exhibits.

—The Rochester Committee has prepared an excellent plan. It will send two representatives to Chicago to board the special train here. These committee representatives will ask each delegate to state what phase of the many Rochester activities he or she would find most interesting and profitable. Each delegate will then be given some distinguished mark—perhaps a colored button—indicating that choice. When the special train arrives in Rochester the delegates will be greeted by the Reception Committee divided into sections, each section wearing some mark of identification—let us say a colored button. For example, the Dietetic Section will wear perhaps a green button, and the group interested in dietetics, all wearing green buttons, will likely go to the Kahler Corporation and other phases of that particular work. Possibly a Grey Button Group will visit operating room, et cetera.

The hospitable Rochester Committee has already planned to serve luncheons to 650 guests. St. Mary's Hospital will play hostess to 200; Kahler will entertain 200; the State Hospital will serve 200, and the Rochester Diet Kitchen will care for 50. After luncheon all groups will assemble, when the two Mayo brothers will speak to the delegates on a program which will include other interesting speakers.

It is urged that all delegates who wish to take advantage of this highly interesting and profitable stop-over privilege will immediately get in touch with their local chairman, so that they will be sure to take the special train.

Deaths

William J. Blewett, Chicago; University of Toronto Faculty of Medicine, Toronto, Ont., Canada, 1890; member of the Illinois State Medical Society; aged 68; died, July 8, at the Oak Park (Ill.) Hospital, of heart disease.

Edmond De Witt Converse, Chicago; Chicago Medical College, 1874; Medical Department of Columbia College, New York, 1875; member of the Illinois State Medical Society; aged 74; died, in June, of mitral stenosis, chronic myocarditis and chronic nephritis.

Eugenia Margaret Culver, Glencoe, Ill.; Illinois Medical College, Chicago, 1901; aged 59; died, July 17, at a hospital in Evanston, of heart disease.

Hubert Fairleigh Dunn, Chicago; University of Munich, Germany, 1914; aged 39; died, July 4, of acute appendicitis.

William Otterbein Krohn, Chicago; Northwestern University Medical School, Chicago, 1905; a Fellow, A. M. A.; formerly head of the department of philosophy, psychology and ethics, Adelbert College and Cleveland College for Women, Western Reserve University, Cleveland; assistant professor of psychology and pedagogy, University of Illinois, and professor of psychiatry, Loyola University School of Medicine, Chicago; delegate to the American Medical Association in 1918; psychologist to the Eastern Hospital for Insane, Kankakee, Ill., 1897-1899; specialized in neurology and psychiatry; served during the World War; author of "In Borneo Jungles" and other books, and co-author of "Insanity and Law"; aged 59; died, July 17, at the West Suburban Hospital, Oak Park, Ill., of hypernephroma with metastases in the lungs and brain.

George Allen Lightle, Ashland, Ill.; College of Physicians and Surgeons, Keokuk, 1896; member of the Illinois State Medical Society; aged 57; died, June 6, at St. John's Hospital, Springfield, of intestinal obstruction following a cholecystectomy.

Henry S. Llewellyn, La Grange, Ill.; Hahnemann Medical College and Hospital, Chicago, 1892; Chicago Homeopathic College, 1893; aged 68; died suddenly, June 21, of heart disease.

Daniel Lyons, Ashland, Ill.; American Medical College, St. Louis, 1883; aged 79; died, May 26, of carcinoma of the nose.

John Roseman Marshall, Sheffield, Ill.; Rush Medical College, Chicago, 1896; a Fellow, A. M. A.; formerly member of the school board and board of health; on the staff of the Julia Rackley Perry Memorial Hospital, Princeton, Ill.; aged 55; died, June 23, at the Presbyterian Hospital, Chicago, of cysto-ureteritis, pyelonephritis and pyemia.

Thomas M. McIlvaine, Peoria, Ill.; Rush Medical College, Chicago, 1881; for many years a member of the school board; aged 73; died, May 17, at the Proctor Hospital, of pneumonia.

Nathan W. Melton, Wayne City, Ill.; American Medical College, St. Louis, 1883; aged 85; died, June 17, of cerebral hemorrhage.

Adolph Hans Olsen, Oak Park, Ill. (licensed Illinois, 1898); aged 57; died, May 15.

Frederic F. Seville, Chicago; University of Illinois College of Medicine, Chicago, 1895; a Fellow, A. M. A.; aged 60; died, June 4, of lobar pneumonia.

George F. Slater, Chicago; Fort Wayne (Ind.) College of Medicine, 1896; aged 52; died, June 19.